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ECONOMIC AND INDUSTRIAL AFFAIRS

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31 August 1982

EAST EUROPE REPORT
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INTERNATIONAL AFFAIRS

POLISH CONSTRUCTION OF SOVIET OFFSHORE DRILLING PLATFORM DESCRIBED

Warsaw EXPRESS WIECZORNY in Polish 6 July 82 pp 1, 2

[Article by Andrzej Kiszkis, "The Industrious 'Maja' Is Bustling about Feverishly"]

[Text] We are constructing a drilling platform on the Soviet continental shelf.

The floating drilling platform of Petrobaltic, a joint organization of oil exploration in the Baltic, is already in its third working season.

There is crude oil at the bottom of the Baltic. That was gradually ascertained by seismic research conducted by the ship "Copernik." At that time the structure of the substratum and the places where there should be conditions for the existence of oil pools were established. That is one matter.

A second, no less complicated, matter is the question of extracting this oil, in other words, of reaching below the bottom of the sea, for the pools located at a depth of several thousand meters. This is expensive (several times more than with land drilling), technically complicated, but...necessary.

The world energy crisis is forcing various states to search for their own fuel resources, although the expenses incurred for this are immense. Sometimes they exceed the possibilities of one partner--and then companies are established just like the Petrobaltic. Financial outlays for the exploration are borne jointly, and in the case of participation in exploitation, the principle is adopted that the owner of the continental shelf takes half of the profit and the remaining two partners, 25 percent each.

Petrobaltic's floating exploratory platform executed one borehole in the first year of service and in 1981 made four on our continental shelf--and it was then that crude oil was found.

On 3 May a core filled with crude oil was penetrated at the bottom of the sea for the first time. At that time experimental exploitation of the pool was carried out for four days in order to gain an understanding of its resources,

value, and conditions for extraction. Then these boreholes were plugged; studies of the samples obtained are going on, and, furthermore, the extraction of crude oil on the open sea far from land is neither a simple nor an inexpensive undertaking. For that we must still wait.

In the meantime Petrobaltic is already building a stationary, so-called shallow-water drilling platform on the Soviet continental shelf in the vicinity of Baltiysk, 6 miles from shore. The work began in June of last year, and the Soviet side wants to start drilling already in this year.

Employed at the construction site are, among others, units of the Polish Ship Salvage Service [PRO]--the floating crane "Maja" and the "Perkun," which is basically an icebreaker but also a ship able to perform a number of other functions; now it protects the "Maja," assures towing services for it, and in addition has aboard a team of divers, for whom there is no lack of work. By the way, the "Perkun" is the first ice breaker in history to sail to the Amazon: this was during one of the great oceanic towing operations often carried out by PRO ships.

I am sailing to the construction site of the extraction platform on the salvage tugboat "Rosomak" under Captain Witold Tomalak and First Officer Stanislaw Sanocki. On the boat is also Krzysztof Kowalski, the manager from PRO headquarters, who was selected for discussions with Soviet contracting parties responsible for the carrying out of scheduled and warranty repairs of the "Maja" (the Sevastopol' shipyards built the crane in 1980) without docking.

The platform is of Soviet design. The designers of the whole mechanism are from Baku. Similar platforms have been built on the Black and Caspian Seas for 10 years. The decks between them sometimes stretch for several kilometers, so that whole towns have arisen on the sea there. The task of the "Maja," whose maximum lifting capacity exceeds 300 tons, is to transport 170-180-ton elements of towers, from Klaipeda so-called stools (obviously in appearance they remind one somewhat of that piece of furniture) and to set up stationary structures on the ocean bottom, the depth of which there is over 27.5 meters. The height of the "stool" exceeds 40 meters, and with pile-drivers steel pipes filled with concrete are driven 50 meters deeper into its "legs" resting on the bottom. Anchors on guy wires assure the stability of the tower. It is the task of Polish divers to penetrate the bottom under the tower and in the place where the anchors are put. The Petrobaltic drilling ship the "Barракуда," among others, is employed at the construction site for this purpose.

The industrious "Maja" has already carried from Klaipeda, which is 74 nautical miles away, and put in place 6 such stools, and there are 2 more to be transported. Living accommodations for the crew and a helicopter pad will be about 50 meters from the main body of the platform. One of these "stools" can be found close by, at the bottom of the sea: this is the result of storms, which makes the construction workers' lives miserable.

The best testimony to this is that on the day when I was on the platform, the "Maja" was just having its 34th day of effective work in the course of 10 months. And such a busy bee is much more effectively used here than usual.

The contract of the PRO crew foresees work until 25 September; after the platform is mounted, the drilling tower itself will be built by personnel from Kaliningrad. They will lay the pipeline from the tower to the shore of the sandbar and then under the Vistula Bay to land.

As I already mentioned, the first crude oil should be flowing already in this year. A new stage will begin in Petrobaltic's history: the exploitation of deep sea crude oil...

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CZECHOSLOVAKIA

AGRICULTURAL MACHINERY STATUS IN CSR ASSESSED

Prague PLANOVANE HOSPODARSTVI in Czech No 5, 82 pp 56-70

[Article by Eng Michal Pavluv, Czech Bureau of Statistics: "The Technological Base of CSR Agriculture in the Sixth Five-Year Plan"]

[Text] The development of agricultural production, one of the most essential factors in the development of socialist society, has been constantly in the forefront of attention of our party and governmental authorities, as confirmed by the 13th Plenum of the CPCZ Central Committee in March 1979 and by the Fourth Plenum of the CPCZ Central Committee held in October 1981 and focused on current tasks in the development of agriculture and nutrition.

The 13th Plenum of the CPCZ Central Committee stipulated the strategic task of gradually achieving self-sufficiency in grain production and of further upgrading the standard of overall self-sufficiency in our food production. To fulfill this challenging goal, we must gradually create preconditions in our agriculture for comprehensive socialist rationalization in production, labor and management of scientific-technological development and further develop the material-technical base and its essential factor, refurbishing the technical base with efficient modern machinery.

In comparison with 1975, when the value of machinery and equipment in the CSR agriculture represented Kcs 26.6 billion in comparable 1977 prices, i.e., 25.8 percent of all capital assets, toward the end of 1980 it amounted to as much as Kcs 39 billion and its share of capital assets increased to 28 percent. If the share of funds for purchases of new machinery and equipment amounted in 1970 to 39 percent of the total volume of investment work and deliveries, in 1980 it was actually 45 percent, even though the plan for deliveries of certain types of machinery had not been fulfilled. Expressed in financial terms, it represented Kcs 4.1 billion in comparable 1977 prices. During the Sixth Five-Year Plan, the volume of investments in basic machine production funds in the socialist sector of CSR agriculture amounted to Kcs 20.8 billion as compared with the actual situation of the Fifth Five-Year Plan amounting to Kcs 14.4 billion (in comparable 1977 prices).

Although other branches have achieved numerous positive results in the fulfillment of their obligations to our agriculture, the task which remains extremely urgent is to equip it with appropriate technology, as the Fourth

Plenum of the CPCZ Central Committee underlined. This primarily concerns gradual replacement of the outdated tractor fleet with new machinery, requisition of sufficient numbers and selections of trailers for tractors, root crop harvesters, machinery for fodder production, particularly in hill-side and mountain areas, machinery for harvesting vegetables and special crops, specially adapted trucks, and also spare parts.

As the general secretary, Comrade Husak, and the secretary of the CPCZ Central Committee, Comrade Pitra, emphasized at the Fourth Plenum of the CPCZ Central Committee, in order to deal with these problems we must mobilize our internal resources, starting with research and development in machine engineering and ending with off-season maintenance of the machinery. There still exist ample opportunities to improve the operation of our agricultural enterprises by cooperating in the use of efficient technology, by avoiding unnecessary transfers of technology, by efficiently combining individual operations, by upgrading the quality of the maintenance and repairs of agricultural technology, and by more rational management of consumption in production (materials for maintenance and repairs, consumption of propellants and lubricants, etc).

This measure is a part of the comprehensive socialist rationalization program on which our enterprises, management and control authorities must focus maximum attention for the very reason that the projection of material and technical deliveries for the Seventh Five-Year Plan envisages only deliveries which are the most essential for the fulfillment of the decisions of the 13th Plenum of the CPCZ Central Committee.

In the following segments of our contribution, we shall offer basic data on the current equipment of our agricultural enterprises in the CSR with the main types of machinery which are vital for agricultural production, and present the structure and placement of the agricultural machinery fleet, the degree to which such machinery is utilized as well as the fundamental factors determining an efficient use of essential types of mechanization.

Tractors

Tractors furnish most power traction in our agriculture and will continue to furnish it in the future. As of 1 January 1981, CSR agriculture owned 101,465 registered tractors. Until the end of the Fifth Five-Year Plan their numbers were increasing. Their inventory reached a peak on 1 January 1976 with 103,307 tractors, after which their numbers began declining during the Sixth Five-Year Plan. While in the Fourth Five-Year Plan the average annual increment of tractors was 2,235 and 858 tractors in the Fifth Five-Year Plan, during the Sixth Five-Year Plan the absolute reduction was 1,842 tractors, i.e., a average of 368 vehicles annually, due to the elimination of outdated models and to lower deliveries of new machinery than stipulated by the state plan for operations for individual year of the Sixth Five-Year Plan.

Although the renewal of the tractor fleet failed to progress to our satisfaction--with an 8-year service life of tractors (proceeding from the ratio of the number of new machines purchased in a current year to one eighth of the

inventory) the achieved degree of replacement was only 35.8 percent in 1980-- the share of tractors with more power and of greater efficiency in total deliveries increased, which was reflected by higher power saturation expressed by installed capacity of motors of the tractor fleet. Early in the Seventh Five-Year Plan it amounted to 4,574,700 kW, which is 14.6 percent higher than in 1975 and more than 50 percent higher than in 1970. Average installed capacity per physical tractor went up from 38.6 kW in 1975 to 45.1 kW in 1980.

Development of the Tractor Fleet in CSR Agriculture During the Sixth Five-Year Plan According to the Situation as of 1 January

	9 celkem	10 z toho	11 st. statky	Index	
				1981/1976	
1	Traktory celkem ks	103 307	101 465	65 798	20 069
2	z toho kolové	93 846	94 222	61 304	18 675
3	pásové	9 461	7 243	4 492	1 394
4	Podíl kolových traktorů z celkového počtu v %	90,8	92,9	93,2	93,1
5	Podíl traktorů s výk. 58,9 kW a více z celk. počtu v %	16,5	25,8	20,5	31,2
6	Instalovaný výkon motorů trakt. parku v tis. kW	3 990,2	4 574,7	2 930,3	964,4
7	Ø inst. výkon na 1. fyz. traktor	38,6	45,1	44,5	48,1
8	z toho na kolový traktor	37,3	43,9	43,4	47,0

Key:

1. Tractors - total
2. of which wheeled
3. caterpillar
4. Share of wheeled tractors in the total, in percent
5. Share of tractors with capacity of 58.9 kW or more in the total in percent
6. Installed capacity of motors in the tractor fleet in thousand kW
7. Average installed capacity per physical tractor
8. of which per wheeled tractor
9. Total
10. of which
11. state farms

The Capacity Structure of Tractor Fleet

By increasing the share of heavy-duty tractors in total deliveries, the structure of the tractor fleet was changed. In the Sixth Five-Year Plan, 25,541 new tractors were purchased for CSR agriculture, including the State Tractor Stations [STS] (statistical data Zem S2-01) and 21.7 percent of them were models ZT 300 and 303 made in the GDR, Zetors with 120 and more HP capacity, and ST-180 and K-700 made in the USSR.

If in 1970 the machinery of the lowest capacities, i.e., under 29.4 kW (40 HP), amounted to almost 43 percent of all tractors, their share declined to 24.9

percent before the end of 1975 and to 16.9 percent during the Sixth Five-Year Plan. During the Sixth Five-Year Plan the highest increase appeared in the 52.2-73.6 kW (71-100 HP) category of tractors, 57.4 percent of which are represented by model Zetor 8011 tractors, including their modifications, 16.9 percent by GDR-made tractors, models ZT 300 and 303, and 25.7 percent by caterpillar tractors imported from the USSR.

Representation of Efficiency Categories of Tractors in CSR Agriculture According to the Situation as of 1 January

	4 celkem	5 z toho		7 Rozdíl proti	
		1976	1981	JZD	r. 1976 v bodech
1	Traktory celkem (ks)	103 307	101 465	65 796	20 069
2	Zastoupení tříd v %: do 29,4 kW	24,9	16,7	17,4	11,0
	30,2— 51,5 kW	58,5	57,5	58,7	57,7
	52,2— 73,6 kW	15,3	20,0	18,1	24,5
	74,3—117,8 kW	—	2,1	2,1	3
3	nad 117,8 kW	1,3	3,7	3,7	4,5

Key:

1. Tractors--total
2. Share of categories in percent: under 29.4 kW
3. over 117.8 kW
4. Total
5. of which
6. state farms
7. Difference in comparison with 1976, in points

On the republicwide scale, state farms have a more efficient capacity structure in their tractor fleet. If the share of tractors in the 52.2-73.6 kW category amounted for JZD [unified agricultural cooperatives] to 18.1 percent as of 1 January 1981, the share of state farms was 6.4 percent higher. The largest share of efficient heavy-duty tractors (52.2 kW and higher) is in North Moravia Kraj, 29.7 percent of the total, and the lowest in the capital city of Prague, 18.3 percent. However, the further development of the efficiency structure of tractors will also be affected in all probability by the growing interest of agricultural enterprises in categories of less efficient tractors as a result of the current needs to conserve propellants.

Wheeled and caterpillar tractors of lower capacities (i.e., under 51.5 kW) are extensively represented mainly because of the obsolete, "defunct" models of tractors, such as Zetor Super 50. As recently as on 1 January 1981 the agricultural inventory in the CSR included, and in most cases also operated, more than 8,600 of them, i.e., almost one-tenth of wheeled tractors.

Efficiency Structure of Tractors According to Krajs in CSR Agriculture as of
1 January 1981

	Invent. v ks	11 počet 13	12 do 29,4 kW	Zastoupení výkon. tríd v %			14 nad 117,8 kW
				30,2— 51,5 kW	52,2— 73,6 kW	74,3— 117,8 kW	
1. Hl. m. Praha	766		39,8	41,9	11,3	0,7	3,3
2. Středočeský	17 888		18,4	56,7	18,9	1,7	4,3
3. Jihočeský	12 612		15,5	59,3	19,4	2,0	3,8
4. Západoceský	10 838		15,1	55,3	22,7	2,1	4,8
5. Severočeský	9 484		15,1	56,7	21,7	1,8	4,7
6. Východočeský	17 215		17,7	59,6	17,4	1,7	3,6
7. Jihomoravský	21 299		16,4	57,1	19,5	3,5	3,5
8. Severomoravský	11 363		9,1	61,2	23,2	2,5	4,0
9. CSR	101 465		16,7	57,5	20,0	2,1	3,7
10. SSR (pro srovnání)	35 198		6,7	53,6	30,7	3,7	5,3

Key:

- 1. Capital City of Prague
- 2. Central Bohemia
- 3. South Bohemia
- 4. West Bohemia
- 5. North Bohemia
- 6. East Bohemia
- 7. South Moravia
- 8. North Moravia
- 9. CSR
- 10. SSR (for comparison)
- 11. Inventory in units
- 12. Representation of efficiency categories in percent
- 13. under 29.4 kW
- 14. over 117.8 kW

Renewal of the Tractor Fleet

Early in the Seventh Five-Year Plan, CSR agriculture had at its disposal 94,200 wheeled and 7,200 caterpillar tractors. The degree of the renewal of the tractor fleet in general, which is calculated by the ratio of the number of new tractors purchased in 1980 to one eighth of the inventory as of 1 January 1981, amounted in the CSR agriculture in 1980 to only 35.8 percent in comparison with 40.8 percent in 1979 and to 50 percent of all tractors, amounted to 32.6 percent and in state farms to 43.2 percent in 1980.

Calculation of the degree of the renewal from total inventory is distorted to some extent because heavy-duty tractors which were increasingly more represented in the deliveries can substitute for the capacity of 2, 3 or more tractors of lesser capacity. We shall obtain a more objective picture of the problems in question if we consider the overall installed capacity of the motors in the tractor fleet as of 1 January 1981, one eighth of which should be renewed by simple replacement with installed capacity of motors of machinery purchased in 1980. Even this comparison, however, indicates that on the republicwide scale the degree of the renewal in 1980 had not met even one-half of the requirements of simple replacement. In the agriculture of the CSR it amounted to 47.6 percent, in the JZD to 45.5 percent, and in state farms to 57.2 percent.

Age Structure of the Tractor Fleet

The unsatisfactory situation in the renewal of the tractor fleet stems, next to the nonfulfillment of the planned deliveries of new machinery, also from the particularly high share of their deterioration and obsolescence. This has been confirmed by the latest one-time selective study of the age structure and utilization of agricultural technology conducted on 1 January 1979 by provincial authorities of the Czech Bureau of Statistics in all state farms and in a selected system of JZD representing roughly one fourth of all JZD operating in the CSR. Fully 55.7 percent of the inspected tractors were vehicles of the highest age categories, i.e., over 8 years old. In comparison with the results of the first study of 1 January 1974, in the course of 5 years their share in the entire system increased by 4.1 points and in the selected system of JZD by as much as 5.5 points. As of 1 January 1979, tractors under 5 years of age represented only 27.3 percent and their share was up only 1.1 point over the actual situation in 1973. Moreover, the age structure of tractors in individual krajs of the CSR failed to develop satisfactorily.

Development of Age Structure of Tractors in the System Under Study in CSR Agriculture

	10 Podíl traktorů z inventářu počtu k 1. 1. 1979		13 Rozdíl proti stavu k 1. 1. 1974 v bodech				
	starších		11 než 8 let	12 do 5 let	13 starších	14 než 8 let	15 do 5 let
	11 než 8 let	12 do 5 let					
1. Středočeský	59,0	25,2			+ 5,1	+ 2,1	
2. Jihoceský	53,0	29,5			+ 3,0	+ 0,8	
3. Západoceský	55,1	27,0			+ 0,6	+ 1,4	
4. Severočeský	50,9	30,9			+ 5,8	+ 0,8	
5. Východočeský	61,0	25,3			+ 8,0	+ 1,8	
6. Jihomoravský	55,7	25,1			+ 3,2	- 0,1	
7. Severomoravský	48,7	30,4			- 0,8	+ 2,0	
8. CSR	55,7	27,3			+ 4,1	+ 1,1	
9. SSR (pro srovnání)	32,5	42,1			- 15,5	+ 16,0	

14. Poznámka: šetření za hl. m. Prahu se neprovádělo.

Key:

1. Central Bohemia kraj	12. under 5 years of age
2. South Bohemia kraj	13. Difference as compared
3. West Bohemia kraj	with the situation as
4. North Bohemia kraj	of 1 January 1974 in
5. East Bohemia kraj	points
6. South Moravia kraj	14. Note: Study did not
7. North Moravia kraj	include the capital city
8. CSR	of Prague
9. SSR (for comparison)	
10. Share of tractors in inventory	
as of 1 January 1979	
11. over 8 years of age	

Tractor models Zetor 3011, 4011, Zetor Super 50, Zetor 5511, small tractors, RS-09, GT 123, 124, etc. appear most frequently among the oldest types of wheeled tractors. In the system under study, the share of this machinery in the highest age category represented 8.4 percent as of 1 January 1979 and the above-mentioned models still amounted to almost 60 percent of all 94,200 wheeled tractors listed in the Zem S2-01 bulletin as of 1 January 1981. These two examples signal the need for faster replacement of the existing tractor fleet.

Equipment of Agriculture with Tractors in Conversion to Unit of Production Area

Although in recent years the renewal of the tractor fleet progressed less than satisfactorily, during the period of the building of mass production in agriculture it marked great changes. While in 1955, for instance, there were only 5.4 tractors per 1,000 hectares of agricultural lands, in the next decade their number increased to 19.7 units. In the beginning of the Sixth Five-Year Plan it amounted to 23.5 vehicles and this situation remained stable all through that five-year plan period. As of 1 January 1981 the capital city of Prague and Central Bohemia Kraj operated the highest, and North Moravia Karj the lowest number of tractors in conversion to 1,000 hectares of agricultural lands. The high number of tractors in the capital city of Prague was due to the fact that as of 1 January 1981 almost 40 percent of a total of 766 tractors belonged in the low-capacity categories under 29.5 kW.

The differences among individual krajcs in the degree of their equipment with tractors in conversion per unit of production area may be demonstrated also by the following calculation: if we multiply 26.5 tractors, which is the share per 1,000 hectares of agricultural land in Central Bohemia Kraj (which has the next highest equipment to that of the capital city of Prague) by the acreage of agricultural lands of each kraj, we obtain the number of tractors corresponding to the level of equipment in the best equipped kraj. If we compare this information with the actual equipment in individual krajcs as of 1 January 1981, we obtain the differences in the number of tractors against the best-equipped kraj. The following table presents the actual situation at the beginning of the Seventh Five-Year Plan, including an evaluation of installed capacity of the motor of tractors per 1,000 hectares of agricultural lands.

Differences in Equipment with Tractors, Total, in Units and Installed Capacity in kW in Conversion to 1000 Hectares of Agricultural Lands as Compared with the Best-Equipped Kraj of Central Bohemia, Situation as of 1 January 1981

	11	Počet traktorů na 1000 ha z. p.		12	Rozdíl v ks proti Středoč. kraji	Počet kW instal. výkonu na 1000 ha	13	14
		1981	index 1981/76					
1	Středočeský	26,5	102,3	—	—	1176	17,6	
2	Hl. m. Praha	46,1	98,4	+ 327	1616	0,8		
3	Východočeský	25,6	103,2	— 589	1117	17,0		
4	Severočeský	24,3	102,1	— 853	1124	9,3		
5	Jižníčeský	23,6	98,3	— 2652	1060	21,0		
6	Západoceský	21,0	99,5	— 2853	983	10,7		
7	Jihočeský	21,6	101,4	— 2868	959	12,4		
8	Severomoravský	20,7	97,8	— 3215	979	11,2		
9	CSR	23,5	100,0	—	1062	100,0		
10	SSR (pro srovnání)	14,3	94,1	—	760	—		

Key:

- 1. Central Bohemia
- 2. Capital city of Prague
- 3. East Bohemia
- 4. North Bohemia
- 5. South Moravia
- 6. West Bohemia
- 7. South Bohemia
- 8. North Moravia
- 9. CSR
- 10. SSR (for comparison)
- 11. No of tractors per 1000 hectares of agricultural land
- 12. Difference in No of units as compared with Central Bohemia kraj
- 13. No of kW of installed capacity per 1,000 hectares of agricultural lands
- 14. Share of krajs in the acreage of agricultural land in 1981 in percent

The Use of Tractors

The utilization of the basic means of mechanization has already been the subject of two one-time investigations conducted by provincial statisticians for the years of 1973 and 1978 in all state farms and in selected JZD representing approximately 25 percent of the JZD operating in the CSR (a third investigation will be conducted by provincial statisticians in 1985). In 1978, tractors operated an average of 173 days; in comparison with the first investigation, utilization of tractors was down 4.9 percent (tractors were used 182 days in 1973). Among the wheeled models, medium-capacity tractors, model Zetor 6711 and its modifications, were the most frequently operated in conversion per machine, namely, 231 days as compared with 260 days of the calendar fund in 1978. Among the tractors operating more than 200 days were models Zetor 8011 and its modifications (219 days), Zetor

12011 and its modifications (218 days) and Zetor 5511 through 5718 (209 days). The shortage of tractors in primary agricultural production is obvious also from the fact that tractors Zetor Super 50, whose average age was more than double the stipulated service life and which composed almost 13 percent of the inventory of wheeled tractors as of 1 January 1979, operated on the average 172 days in conversion per machine. As concerns the most efficient wheeled tractors, models ST-180 and K-700, which are decisive for meeting the agrotechnical program for work in fields, the number of days of each vehicle's operation increased; in 1978 it was 169 in JZD, and 176 in state farms, for ST-180 (for K-700 it was 163 per JZD and 185 for state farm), however, at the same time their work shift was reduced from 12.6 hours in 1973 to 11.2 hours in 1978 in conversion per tractor.

As demonstrated by the results of the latest investigation, numerous agricultural enterprises failed to pay due attention to the utilization of heavy-duty tractors in cooperative assistance programs, although that is one of the methods for greater utilization and rationalization of their operation. In 1978, the total days of operation of the most efficient wheeled tractors in cooperative arrangements were only in the 5 to 7 percent range.

Main Factors Determining the Degree of Utilization of Tractors

In the system under study, idle time of tractors (day-long idling and days when the tractors did not operate at all) amounted to 52.5 percent of the entire calendar fund in 1978. The share of day-long idle time in total unproductive time was almost 95 percent.

Most day-long idling was caused by the "interseason rest, including holiday rest." In all tractors in the system under study such idling, which is more or less an immutable indicator, represented in 1978 fully 68.6 percent, i.e., 4,508,700 calendar days of all idle time. If we deduct them from the day-long idle time, in first place, with 32.9 percent, is idle time caused by a shortage of drivers; in second place, with 31.8 percent, by shortages of spare parts and unplanned repairs, and only in third place, with 29.7 percent, is idling due to planned repairs.

The disappointing situation in the age structure of the tractor fleet, the shortage of drivers and the chronic difficulties with the supplies of spare parts are directly reducing the share of productive time. In the 1973-1978 period, when the one-time inspection of the utilization of agricultural technology was under way, productive time declined in state farms and particularly in the selected JZD system, and the share of day-long idling increased.

Along with professional training of operators of efficient technology, the main precondition for agricultural production is to maintain its operational potential. As the secretary of the CPCZ Central Committee, Comrade Pitra, noted in his keynote speech and as participants in the discussion at the Fourth Plenum of the CPCZ Central Committee emphasized, the current situation in this sector is below a desirable level in many agricultural enterprises, and our agriculture has untapped assets precisely here. For instance, if

we could reduce by 10 percent all idling caused by shortages of spare parts, including emergency repairs and shortage of drivers, we would gain within the system under study alone 770 additional tractors which could operate year-round in our agriculture. On the republicwide scale, such a reduction for all tractors would mean savings of more than 2,000 tractors, i.e., almost 45 percent of new machinery purchased in 1980.

Grain Harvesters

During the Sixth Five-Year Plan the acreage of grain crops, including winter and spring rape, was reduced by 58,675 hectares, i.e., 3 percent. As compared with 1,943,700 hectares of cereal crops cultivated in 1975, the actual situation in 1980 was 1,885,000 hectares, and their share in total acreage of cultivation declined from 58 to 56.8 percent. The acreage on which grain crops, including winter rape and turnip rape are cultivated, represented 1,874,800 hectares as of 31 May 1981. In 1980 with an average yield of 4.03 tons per hectare of grain crops in the socialist sector, 6,779,200 tons were harvested in the CSR as compared with 5,697,200 tons in 1975. Until 1975, the inventory of harvester combines in the CSR agriculture was increasing. As of 1 January 1976, 13,900 combine harvesters were registered. During the Sixth Five-Year Plan their number declined to 12,337 units, i.e., by 1,563 units (11.2 percent). For comparison: in the Fourth Five-Year Plan the increment of machinery inventory amounted to 3,506 units (42.0 percent) and in the Fifth Five-Year Plan to 2,055 units (17.3 percent). During the Sixth Five-Year Plan agricultural enterprises in the CSR purchased 5,415 combine harvesters (statistical data Zem S2-01), of which JZD 58 percent, state farms 21.5 percent, and STS 10.2 percent. During the Sixth Five-Year Plan, the reduction of the inventories of combine harvesters in CSR agriculture by 1,563 units was accompanied by improvements in their structure. Today more than 62 percent of them consist of model E-512 imported from the GDR. The most efficient harvester, model E-516, made in the GDR has 10 kg.s [Newton Seconds Permeter] capacity and skilled combine operators achieved with it top seasonal outputs up to 1,300 hectares; 1,077 units of this model are expected to operate during the 1981 harvest. More than 43 percent are already in the ownership of the STS which guarantee that this top technology will be fully utilized.

As of 1 January 1981, 60.9 percent of a total of 12,337 combine harvesters have been operating in the JZD, 20.8 percent in state farms, 6.9 percent in the STS, and the remaining 11.4 percent belong to the SPZ [State Labor Reserves] and centrally managed organizations.

The degree of equipment with combine harvesters may be demonstrated, among other things, also by calculating the acreage cultivated with cereal crops per combine harvester. In comparison with 1975 when the per combine load in the CSR agriculture represented 139.8 hectares, the actual situation in the last year of the Sixth Five-Year Plan was 152.8 hectares, i.e., up 13 hectares per machine (the inventory lists also combine harvesters owned by the STS). During the same period, the load per central machine increased up to 18.6 hectares, reaching 165.3 hectares in 1980, while in the same year in state farms it amounted to 163.7 hectares, which is 15 hectares less than in 1975.

Development of Inventories of Combine Harvesters, Structure of Models, and Equipment with Combine Harvesters in Conversion per Unit of Production Area in CSR Agriculture

	8	Stav k 1. 1.		Index	
		1976	1980	1981	1976
1	Sklizeči obilní mlátičky celkem (ks)	13 900	12 651	12 337	88,8
2	z toho: JZD	8 478	7 824	7 511	88,8
3	státní statky	2 826	2 581	2 568	90,8
4	STS	1 190	852	853	71,7
5	Počet strojů na 1000 ha zrnin ¹ —				100,1
6	kmen. stav				
7	— zemědělství ČSR	7,1	6,8	6,5	91,6
8	— zemědělství SSR (pro srovnání)	6,3	6,0	5,7	90,5
9	¹ Plocha osevu zrnin včetně ožimé řepky a řepice k 31. 5.				95,0

Key:

1. Combine harvesters--total (units)
2. of which: JZD
3. state farms
4. STS
5. No of machinery per 1,000 hectares of grain crops¹- basic situation
6. --CSR agriculture
7. --SSR agriculture (for comparison)
8. Situation as of 1 January
9. ¹Area of grain crop cultivation, including winter rape and turnip rape as of 31 May.

The JZD in the West Bohemia, North Bohemia and Central Bohemia krajs are the best equipped with combine harvesters. In 1980, the differences between the highest and the lowest acreage of cereal crops in conversion per central machine in individual krajs were 45 hectares in JZD and 57.6 hectares in state farms.

Age Structure, Degree of Renewal and Utilization of Combine Harvesters

The latest study conducted in 1978 investigated the age structure in 35.7 percent of all combine harvesters. The age structure of the under-5-year-old group marked distinct improvements. As compared with 1973 when the share of combine harvesters in this group was 35.4 percent, their representation increased to 59.2 percent as of 1 January 1979. The share of the oldest combine harvesters (over 12 years) increased from 3.9 percent as of 1 January 1974 to 7.2 percent as of 1 January 1979. During the Sixth Five-Year Plan, the renewal of the combine harvester fleet deteriorated due to declining purchases of new machinery. If with the delivery of 1,440 units for CSR agriculture in 1976 the degree of the renewal of combine harvesters with 12-year service life reached 124.8 percent (128.6 percent in JZD, 151.5 percent in state farms), it dropped to 75.2 percent (in JZD to 59.3 percent, in state farms to 65 percent, and in the STS it rose to 236.6 percent) because the number of machines purchased in 1980 declined to 773.

In the last year of the Sixth Five-Year Plan, all forms of widely developed cooperation and also the method of comprehensive streamlined grain harvesting more extensively applied contributed to steady progress of the grain harvest. In 1980, combines harvested 1,635,400 hectares of grain crops in the CSR, i.e., 99.7 percent of the planned area. In addition, they harvested 60,400 hectares of legumes and 62,100 hectares of rape. The average load per combine harvester without cooperation was 132.3 hectares as compared with 125.3 hectares in 1976. In 1980, all forms of assistance (cooperation between enterprises in the okres, between okreses and krajs and between the CSR and the SSR) involved a total of 9,251 units of combine harvesters, i.e., 74.8 percent of the central inventory of the krajs and organizations under direct management of the CSR MZVz. As compared with the actual situation of 1979 (64.9 percent involved in cooperation programs), the number of combine harvesters used in cooperation increased by 842.

In programs of cooperation, combine harvesters of the CSR harvested 478,000 hectares within the CSSR, of which 100,700 hectares was in the SSR. However, only 57,600 hectares were harvested in the CSR with machinery from the SSR by mutual cooperation. The extent of all types of cooperative assistance increased 12.4 percent over 1979. All forms of cooperation reduced the average load per combine harvester in agricultural enterprises from the initial 132.3 hectares to 97 hectares. The volume of 141.7 hectares planned for 1981 includes 98.8 hectares to be serviced by combine harvesters used in cooperation. Despite positive achievements in the program of cooperation, further opportunities for its improvement must be sought. In 1980 alone the acreage of grain crops harvested by cooperation saved 3,619 combine harvesters in the CSR. In concluding agreements on cooperation, however, maximum attention must be focused on the most economical transport of the combines in order to conserve propellants.

Potato Cultivators and Harvesters

With the exception of 1970, the acreage cultivated with potatoes has been steadily declining over the past 15 years. In the 1976-1980 period alone the acreage of potatoes in the total CSR agriculture dropped from 158,800 hectares to 130,000 hectares, i.e., nearly 29,000 hectares.

While the operations connected with the cultivation and harvesting of grain crops have been fully mechanized, the situation is less than satisfactory as concerns potatoes (mainly their harvest, postharvest treatment and storage). Although in 1980 more than 80 percent of the harvested areas in two of the three most productive krajs, East Bohemia and South Moravia, were mechanically harvested, the 71.1 percent statewide average is still below the standard stipulated by the directives of the Sixth Five-Year Plan (to use harvesters in 75 percent of the harvest of potatoes, with the exception of early varieties). As compared with 1976, the amount of potatoes harvested mechanically increased to 10.7 percent, which represents an average semi-annual increment of 2.1 percent.

In 1980, the socialist sector of agriculture operated 3,662 potato harvesters for the total potato-growing acreage (113,200 hectares), in other words, the

average per registered harvester was 30.9 hectares (in the SSR 44.3 hectares) as compared with 41.1 hectares in 1975. During the Sixth Five-Year Plan, agricultural enterprises in the CSR purchased 1,951 single-to triple-row potato harvesters; nevertheless, during the same period their inventory increased by no more than 26 units. This fact in itself calls attention to the relatively high physical deterioration and obsolescence of the harvester fleet (particularly of model E-665). In the Sixth Five-Year Plan, their number remained practically unchanged, except in the krajs of Central and South Bohemia; agriculturists in North Bohemia Kraj reported the steepest decline.

The fact that in 1980 the share of mechanized potato harvest operations amounted to only 71.1 percent was largely the result of the current unsatisfactory conditions of our harvesting technology in terms of the units and structure of potato harvesters.

Type Structure of Harvesters and Its Development in the Sixth Five-Year Plan

	9 Zeměd. ČSR k 1. 1. 81	10. z toho		Index	
		JZD	11. státní statky	1981/ 1976	1981/ 1980
1.	Sklizeče brambor 2ř.	3168	2464	95,2	94,6
2.	Sklizeče brambor ost.	494	384	160,9	107,6
3.	Sklizeče brambor celkem	3662	2848	100,7	96,1
4.	Zastoupení typů v %:				
5.	E-684 (3ř.)	4,7	4,0	8,5	—
6.	E-676 (2ř.)	31,2	32,3	24,9	—
7.	E-671, 667 (2ř.)	52,0	51,2	58,3	—
8.	Ost. typy (1ř. a ost.)	12,1	12,5	8,3	—

Key:

1. Potato harvesters - double row
2. Other potato harvesters
3. Total potato harvesters
4. Representation of models in percent
5. E-684 (triple-row)
6. E-676 (double-row)
7. E-671, 667 (double-row)
8. Other models
9. CSR agriculture as of 1 January 1981
10. of which
11. state farms

In order to better furnish our agricultural enterprises with potato harvesters, several measures have been adopted so as to equip their fleet with efficient new machinery. In 1976, 434 units of single- to triple-row harvesters were purchased as compared to only 211 units in 1980. A total of 1,951 machines was purchased during the Sixth Five-Year Plan for CSR agriculture, of which JZD received 1,472 units, state farms 370 units, enterprises under direct management of the CSR MZVz 98 units, SZP [State Agricultural Enterprises] 9 units and STS 2 units.

The declining deliveries of new machinery are reflected in the deteriorating age structure of the potato-harvester fleet. Harvesters under 5 years of age made up 65.5 percent of a total of 1,268 inspected harvesters (36.7 percent of the total of double-row harvesters as of 1 January 1979), as compared with the actual situation of 78.4 percent in 1973.

The decline in the number of new harvesters purchased in the Sixth Five-Year Plan was also reflected in the extent of their renewal. As compared with 1976 when with a 12-year service life of potato harvesters it represented 139.2 percent (134.3 percent in JZD and 180 percent in state farms), the extent of their renewal declined to 69.2 percent in 1980 (in JZD to 64.1 percent and in state farms to 108.7 percent).

Utilization of Potato Harvesters

The share of mechanized potato harvest in 1980 was 71.1 percent due to the shortage of harvesters suitable for our environment and particularly due to inclement weather during the harvest and to the extent to which the harvesters were deployed. The unsatisfactory situation in the use of harvesters stems, among other things, also from frequent machinery breakdowns in heavy and stony soils, from insufficient supplies of the necessary selection of spare parts, and last but not least, from the standard of organization itself. If we consider, for instance, the causes of day-long idle time, as it appears from the recent study (reduced by idling due to off-season rest, holidays and planned repairs), then almost 30 percent of idling stems from shortages of spare parts and from emergency repairs, and 11 percent from shortages of drivers (combine operators).

Very few harvesters are involved in cooperation programs. As the MZVz of the CSR reports in its documentation, 190 harvesters, i.e., 5.6 percent of the central base, which were included in cooperation programs in 1980 harvested 936 hectares. As compared with the actual situation of 1979, this form of cooperation did not expand so as to involve more machinery. Problems with spare parts continued in 1980 as well; specifically, rotor disks, chains, shakeout pulleys, etc., were lacking. In 1980, the average output achieved for the season amounted to 21 hectares, which was 3.7 hectares down from 1979. The volume of mechanized harvesting did not increase in 1980 in any kraj. On the contrary, the West Bohemia, South Bohemia, South Moravia and Central Bohemia krajs reported the steepest decline.

In order to better utilize potato harvesters, we must focus attention especially on supplementing their fleet with new, efficient machinery, on selecting suitable areas for mechanized harvesting, on the maintenance of weed-free crops during the period of their growth, and on the cultivation of new varieties resistant to mechanical damage. With the increasing reduction of work forces, the above-mentioned objectives must be achieved without delay if we wish to harvest potatoes mechanically with a minimum of volunteer labor. During the potato harvest in 1980 alone, the MZVz of the CSR needed such assistance of teams of volunteers from the Ministry of Education who worked almost 330,000 hours.

Beet Cultivators and Harvesters

In comparison with the acreage cultivated with potatoes, which declined during the Sixth Five-Year Plan by almost 29,000 hectares, the acreage of sugar beets increased during the same period by 1,086 hectares; as of 31 May 1980, it amounted to 158,100 hectares, representing 4.8 percent of all areas of cultivation. Although this share in the total area of cultivation is not significant (for comparison: grain crops total 54.9 percent, potatoes 3.9 percent), the thinning, hoeing and harvesting operations still require a great many work forces. In 1980, 2,348 beet-leaf topers and 3,547 harvesters for divided beet harvest were available for the entire area of sugar beet cultivation. In the Sixth Five-Year Plan, the numbers of conventional triple-row beet topers and harvesters declined by more than one-third, but the numbers of 6-row self-propelled units increased almost 6 times. As of 1 January 1981 this type of efficient technology amounted to less than 30 percent of all of harvesting machinery in CSR agriculture, nevertheless, it has a vital part in the fulfillment of the planned level of mechanized beet harvesting.

As in potatoes, state farms are better equipped than JZD with beet-harvesting technology. In 1980, state farms operated 15.4 units of topers and JZD 14 units per 1,000 hectares of sugar beets, of which 5.1 and 4.4, respectively, were 6-row machines; this difference is even more conspicuous in harvesters-- 16.9 units per 1,000 hectares of beet crops in state farms as compared with 15.1 units in JZD, and in 6-row harvesters, which is 5.2 and 4.1 units, respectively.

The Level of Renewal and Age Structure of Beet Harvesters

Of the 933 new harvesters for divided beet harvesting purchased during the Sixth Five-Year Plan, 558 were 6-row self-propelled machines; however, their inventory declined 6.7 percent as of 1 January 1981, as compared with 1 January 1976. This development was greatly affected by the physical deterioration of the machinery which had to be discarded frequently even before the expiration of its stipulated service life. In the Sixth Five-Year Plan, 938 beet topers were purchased, of which 656 were the 6-row models; thus, their inventory declined 16.3 percent. In 1980, the level of renewal of harvesters in general, with 12-year service life, was 81.6 percent (of which 193.8 percent was in 6-row models) as compared with 108.9 percent in 1976. The level of renewal of all beet topers increased from 78 percent in 1976 to 104.7 percent in 1980, of which for 6-row machines it was 228.5 percent. According to the results of inspection of a selected system of JZD as of 1 January 1979, 41.8 percent of the listed 3-row harvesters were under 5 years of age and 3.4 percent older than 12 years; the situation in state farms was 42.5 and 3.8 percent, respectively. The share of 6-row harvesters less than 5 years old exceeded 95 percent of the inspected machinery in both sectors.

Use of Beet Harvesters

In comparison with the average seasonal output of 3-row harvesters in CSR agriculture which in 1980 amounted to 44 hectares, the actual situation of

6-row harvesters was 138 hectares. The highest output for the season in 3-row harvesters was achieved in the East Bohemia Kraj, 50 hectares, and with 6-row harvesters in North Moravia Kraj, 165 hectares. The JZD in Kylesice in Opava Okres achieved the absolutely highest output for the season with 3-row harvesters, 133 hectares, and the JZD in Rostenice, Vyskov Okres, with 6-row harvesters, 233 hectares.

The standard of utilization is directly determined by the fail-safe operation of the harvesters, by sufficient assortments of spare parts, by expert service, by weed-free crops, and in the case of 6-row harvesters, particularly by sufficient numbers of vehicles of 8-10 ton capacity for crop removal and by the organization of their deployment. A serious problem stems from the fact that in view of work force shortages the operation of self-propelling machinery in certain agricultural enterprises has often been entrusted to volunteers who lack adequate practical experience, and this has affected the quality of work. Integrity of beet plants is an important factor which affects the use of technology as well as the schedule of harvest operations. According to the materials of the CSR MZVz, in 1980 the fields of manually untended beet crops were overrun by weeds, which was detrimental to their yield, increased the losses, and threatened to prolong the harvest until early winter.

Fodder Harvesters

During the Sixth Five-Year Plan, the acreage of fodders on arable lands, permanent meadows and pastures increased from 1,710,300 hectares to 1,783,300 hectares, i.e., 72,900 hectares. Immediately after grain crops (54.9 percent), the acreage of fodders has the highest share of arable areas (30.7 percent). The precondition for harvesting such extensive areas according to agrotechnical schedules is the accessibility of adequate numbers of efficient equipment.

Despite higher deliveries of trailers and self-propelling harvesters, legitimate requirements have not been fully covered to this day especially as concerns machinery for harvesting fodder on hillsides, swath turners and side-delivery rakes, automatic collectors and other machinery. For instance, agricultural enterprises in hillside and mountainous areas had at their disposal as of 1 January 1981 only 1,212 motor mowers for mountain areas, i.e., 717 machines less than at the beginning of the Sixth Five-Year Plan. Fewer than 30 percent of all motor mowers are the self-propelled models Reform and TK-225-U, however, due to their physical deterioration the inventory of these models declined as much as 50 percent during the Sixth Five-Year Plan. In 1980, the fleet of motor mowers for mountainous areas increased by only 15 new machines, which cannot by far satisfy actual needs. The situation with swath turners and side-delivery rakes is also disappointing; over the past 5 years their numbers have dropped considerably. In comparison with 15,100 units at the beginning of the Sixth Five-Year Plan, their inventory declined to 11,400 units, i.e., by 24.5 percent, as of 1 January 1981. In 1980 agricultural enterprises purchased only 280 such machines. Among other machinery, automatic fodder harvesters, collectors

and feeders are very much in demand. Hauling trucks amount at present to 66 percent of all 27,400 tractors with single-axle trailers and haulers. In comparison with 1979, however, their number declined by 320 units, although more than 1,500 units were purchased in 1980. Those data in themselves signal the deterioration of the fleet of haulers and automatic feeders. To meet our demanding tasks in livestock production, the current situation must be resolved expeditiously, especially by the machine engineering industry. The method of producing "home-made" turners, side-delivery rakes and other machinery in cooperative shops certainly does not offer an appropriate solution.

A significant contribution to automation of agricultural operations is seen in the model ZTRS 310 multipurpose vehicle designed for cultivation, fertilization, treatment and harvesting of fodder crops in hillside and mountainous areas. Among other so-called small machines, manual power mowers of our domestic manufacture, made by Agrostroj in Jicin, will be available for harvesting of fodder crops on hillsides; mass production of those mowers and of the multipurpose model ZTRS 310 is not planned until the second half of the Seventh Five-Year Plan.

Among other agricultural machinery with a significant share in agricultural production are tillers and drills. During the Sixth Five-Year Plan, the situation of tractor plows developed unfavorably. On the average, no more than 1,031 new plows were purchased each year, as compared with average losses of 2,550 units annually. For instance, during the Sixth Five-Year Plan the inventory of 5-blade plows declined from 8,572 to 6,331 units, i.e., 26.1 percent. At the beginning of the Seventh Five-Year Plan only 4,489 plows with six and more blades were available for 5,900 heavy-duty wheeled tractors and for 4,500 caterpillar tractors, while in the Sixth Five-Year Plan their inventory increased by less than one-third, the inventory of heavy-duty tractors had doubled. A similar situation is evident in the case of trailers for cultivators.

As of 1 January 1981, the inventories of grain-drill tractor equipment amounted to 9,632 units, almost 30 percent lower than at the beginning of the Sixth Five-Year Plan, however, new machinery had not fully replaced the high losses caused by physical deterioration. During the Sixth Five-Year Plan 2,842 units were purchased, 875 units in 1976 and only 494 units in 1980. As concerns drills for grain crops, the situation was further aggravated by short supplies of spare parts, particularly drill cases and seed boxes. For that reason, in many instances it was impossible to achieve uniform sowing; moreover, the consumption of seed grain increased up to 30 kg per hectare.

Transport Vehicles

Tractor transport still supplies more than three-fifths of agricultural transportation at present; during the Sixth Five-Year Plan the total number of container transport (double-axle trailers and single-axle semitrailers) declined 16.3 percent (23,700 units) to 120,600 units as of 1 January 1981, at which date CSR agriculture had at its disposal 93,250 trailers as compared

with 111,045 units at the beginning of the Sixth Five-Year Plan. The highest share--44.5 percent--belongs to trailers with 4.1 to 6-ton capacity; 34.1 percent in the group were over 6 tons and the remaining 21.4 percent were trailers under 4 tons.

Although in 1980, 3,827 1- and 2-axle container vehicles had been purchased, their inventories declined 3.6 percent as compared with 1979. Almost 62 percent of the purchased trailers were container transporters with more than 6-ton capacity, nevertheless, the currently available tractor transporters with 4.1-ton or higher capacity cannot cover the needs of our agriculture. While, for example, in 1976 5,007 units had been delivered, the situation declined to 1,651 units in 1980.

The situation of single-axle trailers is more encouraging. In 1980, 1,813 new trailers were purchased, almost one-third more than in 1976. Despite that increase, needs have not been covered, mainly for haulers and automatic feeders. During the Sixth Five-Year Plan their share was up from 51.2 percent to 65.7 percent of all single-axle trailers, and as of 1 January 1981 CSR agriculture owned almost 18,000 hauling and automatic wagons, however, the transition to the conventional method of production of dry fodder, due to decreasing supplies of fodder dried by hot air, demanded that additional new technology be added to hauling wagons.

The truck fleet owned by agricultural organizations in the CSR, with the exception of ZZN [Agricultural Supply and Procurement] and food industry, expanded during the Sixth Five-Year Plan from 14,007 to 25,885 units, i.e., on the average by 2,376 units annually (847 units during the Fifth Five-Year Plan). However, cars with a capacity of over 5 tons, which predominate in the structure of trucks, amounted to 74.7 percent of all trucks as of 1 January 1981. Furthermore, as demonstrated by the one-time inspection in 1979, they represented full 47.3 percent of cars of the oldest age category (8 years and older) registered by state farms and JZD as of 1 January 1979.

During the Sixth Five-Year Plan, the truck fleet increased 84.8 percent, however, this was due largely to the purchases of second-hand trucks from construction and other organizations. Their age structure further affects their inventories and has directly reduced the technical preparedness of trucks and increased the need for spare parts. As demonstrated by the recent study of the use of agricultural technology, day-long idle time caused by emergency repairs and by shortages of spare parts represented, for example, in trucks model Tatra 11-148 almost 55 percent of all idling for those vehicles. Our agriculturists are compelled to buy second-hand trucks of higher capacity because thus far model Tatra 815 farm truck with a bulk of 10-12 tons has not been delivered in planned numbers. CSR agriculture has at present fewer than 50 such trucks as compared with 24 in the beginning of the Sixth Five-Year Plan. The Liaz national enterprise undertook the task of designing a truck for agricultural purposes. A KRB [comprehensive rationalization brigade] operating in that enterprise included also representatives of the JZD in Knezmost, of the Agrostroj in Pelhřimov, of the VUZT [Research Institute of Agricultural Technology] in Prague, the STS in Tabor

and of the Institute of Highway Transport. Its specific achievement is that as soon as in 1977, i.e., 1 year after the organization of the KRB, a model of an agricultural automobile designated as MTSP 27 Agro was delivered to the experts in the JZD in Knežmost. According to the results of the tests conducted by the VUZT in Prague, it is the best vehicle operating in our agriculture. This model of farm trucks may bridge the gap that had developed between the completion of development and the start of production of the model Agro-Tatra automobiles. The first 21 automobiles had been delivered to our agriculture as long ago as in 1978 and the 329 units delivered in 1980 raised the inventories of this efficient technology in CSR agriculture to 557 units. Joint Agricultural Enterprises own most (186) of those vehicles.

Differences in the Number of Trucks in Conversion to 1,000 Hectares of Agricultural Land as Compared with the Best Equipped Kraj of North Bohemia, as of 1 January 1981

	13. Podíl krajů na celkové výměře z. p. v %	14. Počet nákl. aut. na 1000 ha z. p. v ks	Index 1981/ 1976	15. Rozdíl proti Sč. krajů v ks	16. % zornění
1. Severočeský	9,0	6,7	186,1	—	70,6
2. Hl. m. Praha	0,4	25,1	140,2	+ 305	77,7
3. Jihomoravský	21,0	6,4	173,0	— 253	82,1
4. Středočeský	15,7	6,1	184,5	— 383	84,8
5. Východočeský	15,6	5,9	196,7	— 521	73,5
6. Severomoravský	12,8	5,8	175,8	— 482	74,7
7. Západočeský	12,0	5,6	186,7	— 581	70,1
8. Jihočeský	13,5	4,9	257,9	— 1057	71,1
9. ČSR	100,0	6,0	187,5	—	76,7
10. of which: JZD	60,9	4,9	175,0	—	82,0
11. state farms	23,2	4,9	188,5	—	73,3
12. SSR (pro srovnání)	—	5,3	171,0	—	61,6

Key:

1. North Bohemia
2. Capital City of Prague
3. South Moravia
4. Central Bohemia
5. East Bohemia
6. North Moravia
7. West Bohemia
8. South Bohemia
9. CSR
10. of which: JZD
11. state farms
12. SSR (for comparison)
13. Share of krajů in total acreage of agricultural land in percent
14. No of trucks per 1,000 hectares of agricultural land in units.
15. Difference against North Bohemia kraj
16. Arability--in percent

The volume of agricultural transport is expanding along with our growing agricultural production, and, therefore, agricultural automobile transportation must be given the utmost attention and the decision of the 16th CPCZ Congress must be fully implemented. According to specifications of the decisions, 4,000 trucks of 7-ton or more capacity, specially designed for agriculture, will be delivered to the branches of the CSR MZVz during the 1981-1985 period.

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In order to create preconditions for the fulfillment of a challenging goal set before our agriculture by the 16th CPCZ Congress, the sector of the technological base must implement several measures articulated in the reports to the October session of the CPCZ Central Committee. Decisions issued by that session stressed the enormous responsibility of the supplier branches for meeting the needs planned in our agriculture. In the Seventh Five-year Plan, the deliveries of new machinery and equipment will amount to Kcs 21 billion. In terms of essential machinery this represents, for example, 22,000 tractors, 4,000 combine harvesters, 2,600 self-propelling cutters, 4,300 loaders and many other machines. The planned volume of funds for machinery and equipment for CSR agriculture in the Seventh Five-Year Plan is about 6 percent higher than the actual situation in the Sixth Five-Year Plan however, higher prices of many machines are keeping physical deliveries on the same level and even reducing deliveries of certain models.

The tasks facing the manufacturers and suppliers of agricultural technology and spare parts are not negligible. The capacities of our machine engineering industry thus far failed to cover our needs; many machines are also manufactured in other branches. As Comrade Pitra underlines in his report to the October session of the CPCZ Central Committee, a new VHJ [economic production unit] organized for this purpose in 1982 will help improve the diffused production of agricultural machinery and unify the management system of its manufacture and marketing. Because at the present time our production capacities cannot be expanded to any considerable extent, we must seek new methods for the production of agricultural machinery and spare parts, as, for example, international cooperation and specialization in agricultural machine engineering industries within the CEMA. While 127 machinery items were produced in such agreements during the Sixth Five-Year Plan, as many as 237 items, or as the case may be, 262 models of machinery will be manufactured during the Seventh Five-Year Plan. The CSSR will specialize in the production of 84 designs. Mass production cuts costs, which is the basic precondition for more efficiency in agricultural machine engineering.

It is encouraging that agricultural machinery contracted on the branch level has increased from 32 to 48 items whose volume represents almost 75 percent of all deliveries. Nonetheless, the situation remains unsatisfactory as concerns the distribution of other machinery and equipment, which remains on the level of supplier-consumer relations between appropriate VHJ. The distribution of machinery on the middle level still suffers from considerable arbitrariness which may be remedied, for instance, by standardized machinery requirements prepared for the Seventh Five-Year Plan by the Institute for Agricultural Technology in Prague.

Manufacturers and suppliers must further increase deliveries of efficient machinery and technological equipment and in addition, more attention must be focused on the utilization of the existing technology in our agriculture, on better organization and management in the operation of agricultural technology, on maintaining technological discipline, on upgrading the expertise of the personnel operating such technology, and last but not least, on improving preventive and expert care for their maintenance and repair which are the main preconditions for higher output of the operation and for extension of the service life of all machinery in operation.

9004

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GERMAN DEMOCRATIC REPUBLIC

KEY ELEMENTS OF TRANSPORTATION RESEARCH OUTLINED

East Berlin DDR-VERKEHR in German Vol 15 No 6, Jun 82 (signed to press 13 Apr 82) pp 184-186

[Article by Dr Werner Lindner, economist, director, Central Research Institute of the GDR Transportation System: "Transportation System Tasks--Challenge for Transportation Research." A translation of the article by Transportation Minister Otto Arndt cited in footnote 5 is published under the heading, "Ways to Raise Efficiency in Transportation System Pointed Out," in JPRS 78885, 1 Sep 81, No 2167 of this series, pp 94-101. For other related information see a series of items translated under the heading, "New Measures to Curb Demand for Transportation Services Analyzed," in JPRS 80301, 11 Mar 82, No 2244 of this series, pp 21-101]

[Text] The tasks that will have to be accomplished by transportation in order to implement the resolutions of the 10th party congress of the Socialist Unity Party of Germany (SED) place demands on the effectiveness of transportation research of greatest economic, transportation (especially energy-economic), technical-technological and material-economic complexity. The seminar with leading cadres of the transportation system for the evaluation of the third convention of the Central Committee of the SED⁽²⁾ established the priority of making more effective use of the possibilities inherent in the relationship between the benefits of socialism⁽⁴⁾ and the scientific-technological revolution by concentrating research potential even more on the main issues of the scientific-technological main directions⁽³⁾ so as to exploit all the reserves of socialist intensification and enhancement of efficiency of the entire transportation system. That requires a higher level of cooperation between science-technology-investment-territory and transportation. Taking the advantages of socialism¹ as a basis and directed

¹Advantages of socialism for utilization of modern science and technology:
--the scientific-technological revolution solely serves the best interests of the entire population and the entire labor force;
--the purposeful, planned development of the economy and of society;
--scientific-technological progress is inextricably bound to social progress and solves the social problems in the best interests of the working class;
--a high level of popular education is called for and supported--education being a potent social factor;
--socialist integration is inextricably tied to scientific-technological progress and serves to hasten it.

toward the goals of socialistic transportation policy⁽⁵⁾, all possibilities, methods and elements of scientific-technical progress are to be used in order

- to shorten processing time by concentration and cooperation as well as broad interdisciplinary work,
- to speed up the tempo of practical implementation and to increase the effectiveness, where the socialistic cooperative work is enhanced by the design engineers, innovators, and users,
- to firmly integrate science and technology into management,
- to increase scientific pioneering as well as to appoint politically responsible research personalities with a critical and progressive mind.

This is what the Minister for Transportation, Otto Arndt, pointed out at the seminar with the leading cadres in Gotha⁽²⁾, and this is what the action program of the basic organizations of the SED in the Central Research Institute of Transportation of the GDR (ZFIV) is aimed at.

In 1982, complex scientific activity will lead to more progress, and influence will be exercised on the reduction of transportation demand and transportation costs. The following activities serve the more effective realization of an economical transportation in the extensive socialistic rationalization in all sectors of the economy, Combines, companies and territories:

- Scientific colloquium of the Central Institute for the socialistic management of economy at the Central Committee of the SED in order to cut down on the specific transportation costs and fuel consumption by optimizing transport utilization.⁽⁶⁾
- Guidelines to be developed by the Scientific Council for scientific research at the Academy of the Sciences of the GDR which factor reduction of transportation costs into reduction of production costs of industrial combines.
- Planning papers and discussions on economic and transportation-economic as well as basic technical-technological transportation problems at a conference of the subsection "basic problems of transportation" of the GDR research council.
- Development of a general scheme of site distribution of the productive forces along with development of goals and bases of optimum site development and territorial rationalization the Scientific Council for questions of site distribution of the productive forces.
- Scientific conference for the reduction of transportation and energy costs of the University for Transportation "Friedrich List" Dresden.
- Chamber of Technology (KDT) conference on "rationalization of transportation, transshipment, and storage (TUL) processes in agriculture" with an extensive exchange of experiences concerning the methods and results of the implementation of central resolutions for the reduction of transportation

costs and energy demand in agriculture, forestry, and the food industry.

--Development of further rationalization measures of the in-company TUL processes by the 2d National TUL conference.

--Development of efficient transportation solutions for the growth of the cities of the GDR in the 80's by the fourth city transport symposium.

These scientific activities make it clear that transportation research is complying more and more with the demands of the functional character of transportation in the societal process of reproduction and the multi-leveled interweaving of scientific-technical progress and that it simultaneously adds to the formation of this character of transportation in the GDR and its integration into the economic strategy.

The monograph "Reproduction and Transportation"(7) is a new work concerning the application of the marxist theory of reproduction. By expanding on and summarizing existing studies in transportation science, it presents data on the function of change of site of transportation in the process of reproduction under the specific conditions of socialism and the successful realization of the main task as part of a consolidated economic and social policy. The effects of site change on the process of reproduction and the securing of the living functions of man are examined. From this, numerous findings and clues are developed that contribute to the formulation of transportation, to its further socialization, its proportionality and optimization, to Combine development as well as the determination of its role in the process of management and planning of the entire state economy and the territory. This monograph, a joint effort of political economists, branch economists, and technicians of the University for Transportation is also an expression of the new dimension and complexity of transportation science.

The selected activities and results are an indication of a positive increase of performance in scientific-technical work which, as measures against the guidelines of the third convention of the Central Committee of the SED and the goals of the 1982 plan year as well as the 1981-1985 five year plan will have to be accelerated, deepened, and broadened.

Integration, Practice of Transportation, and Transportation Research

To increase efficiency and step up scientific-technical progress it will be necessary for science and the practitioners to work closely together. The research collectives of the ZFIV resolve all their tasks in close collaboration with factory and combine workers as well as management. Proof of this is given by the work of almost 100 coordination groups and their coordination concepts and by the close cooperation with over 130 cooperative partners and the nine completed complex agreements.

Based on an overall agreement supplemented by task- and object-related agreements and economic contracts, close socialistic cooperation has been

achieved in /one particular/ sector between the transport and communications system (TuN dept.) of the Magistrate of Berlin, the transport combines, factories and facilities, the State Railroad Directorate, Berlin (Rbd, Berlin) and the ZFIV. The goal and result of this combined effort is to increase the effectiveness of science and technology so that improved solutions are found for passenger and freight traffic. In order to do this:

--suggestions for efficient freight traffic will be worked out with the goal of reducing the total traffic, optimizing division of labor and traffic implementation.

--TuN and Rbd Berlin will get active support from ZFIV to ensure efficient public transportation (OePNV), including the elevated trains, street traffic and parking facilities in various parts of the city, giving special consideration to the apartment construction program.

--the most recent findings on traffic management and city traffic planning will be used.

--transport technologies will be worked out for the railroad, especially drive trains for electric vehicles.

A second focus is on improvement of quality and reliability of the transport of freight and passenger traffic by the use of advanced transport equipment, especially by the use of microelectronics. In order to do this:

--TuN will be supported by ZFIV in preparing for the use of new technical systems to control road traffic,

--scientific-technical principles will be worked out for the introduction of energy-optimal elevated train and subway service through the use of on-board computers and radio,

--scientific-technical prerequisites will be worked out for extensive use of buses within the existing KOM network and in newly built-up areas.

--scientific-technical provisions will be made for testing and introduction of modern engines, especially for the subway and elevated trains

--modern production and service equipment will be developed by OPNV based on microelectronics

--socialistic rationalization of passenger transport, especially through the extensive application of microelectronics, will be developed and implemented by stages

--scientific-technical prerequisites will be created for the electrification of the railroad

--scientific-technical solution will be introduced to improve track and marshalling yard performance.

The third focus will be on long-range development of traffic in the capital. This joint effort will include the preparation of studies, expert opinions and suggested solutions. Basic materials and suggested decisions will be prepared by groups of experts.

For short-term practical application of R&D results, transport facilities and special technical facilities for research and test purposes of the ZFIV will be made available to the dept. TuN and the Rbd, Berlin.

The training of cadre in the fundamentals of agreed and coordinated conceptions, especially for training of personnel in the use of scientific-technical findings, the targeted qualification and promotion of young cadre and partners, and the time-limited cadre exchange of workers and directors, are likewise part of this cooperative venture.

It took almost 10 years for this broad area of cooperation between the capital city of Berlin and the ZFIV to develop. The magistrate's conference for the transport rationalization on 26 Jan 1982 shed light on a number of other aspects.

The example of the partnership between the Rbd Erfurt and the ZFIV also shows what results can be achieved in the economic and social effectiveness of science and technology. In a 10-year cooperative venture, great success was achieved in socialistic rationalization and effectiveness through scientific-technical progress. Contributing to this was modern switching equipment for branch lines from the USSR, modern trace diagram signal boxes, remote data transmission, broad application of optimization models in train assembly and/or transportation technology, the rebuilding of the Erfurt Gbf marshalling yard as the starting point for the mechanization of other facilities at the yard and the use of microelectronics.

In 1980 alone, 16 measures were implemented as a result of R&D work; in 1982, there were 31.(8) The improvement of implementation of goals of the economic strategy attained by these scientific-technical actions was made possible by a concentrated management effort, by great commitment on the part of railroad personnel and the systematic application of new technology based on long-term conceptions. Through the domestic production of rationalization equipment, the formation of scientific-technical production complexes and through close linkage of all members in the chain of Science, Technology, Investments, Territory and Production, an economical and technical-technologically broad application of research results was achieved. The Science Council (WR) of the Central Research Institute of Transportation (ZFIV) had a hand in this development and drew important conclusions for future work from this.(9) For the first time, the German State Railroad has instituted a "rationalization equipment section for microelectronics" (RAME) at the Meiningen signal and communications depot, as a result of close cooperation between practitioners and transport science.

This scientific and productive capacity for microelectronics capability was developed since all necessary conditions were created jointly by the Suhl and Erfurt districts, by the Rbd Erfurt, by the influence of the party organs of the SED and by the responsible managers of the Robotron Combine.

The RAME performs the following tasks:

- Production of assemblies and final products of microcomputer-controlled equipment
- cooperation in R&D tasks of the ZFIV
- Preparatory work and maintenance and repair of equipment used by the Erfurt Rbd district and cooperation in the qualification and instruction of cadre in the service centers.

These work results prove that capable partners have been found for transportation practice by the formation of the Institute for Complex Transport Problems (KIT), the Institute of Rail Transport (IfE), the Center for Process Automation (ZPA) and the Center for Material and Energy Economics (AME).

Territorial (Regional) Structure and Optimal Transport

The function of transport which is to make possible movement from place to place in societal reproduction and to achieve optimum utility in the sense of economic strategy leads to the necessity and--in a socialist planned economy--to the possibility of integrating the territorial aspect into the optimum utilization of transport and, conversely, of integrating transport into the utilization of territorial structure.⁽¹⁰⁾ As we know, all work and consumption processes have their particular location which is to say they are fixed locally and/or territorially. These processes will function properly only if the labor force, its equipment and tools and consumers are united with their consumer goods by changing their location by means of transport. The goals of economic strategy require of economic practice and transportation science to see to it that both the need for transportation on the part of the economy and transport volume within the territory of the GDR and its regional units (districts, cities, Kreises and communities) are reduced to the greatest extent possible.

In transportation science, complex transportation processes and necessary and possible territorial rationalization that goes with them constitute a unified whole which finds clear expression in a number of findings and in the state of work already attained.⁽¹¹⁾ Further work to be done by transportation research and the practitioners should concentrate on the following:

- territorial (regional) reduction of transportation needs
- thoroughgoing territorial (regional) rationalization of goods transport according to the Kreis Glauchau model
- reform of the territorial (regional) transport system in accordance with the Kreis Sondershausen model
- joint and integrated measures by central administration (council of ministers, ministry of transportation, central transportation authority) and

the district councils to fulfill 1982 transportation and shipment tasks by ensuring the supply of planned quantities of Diesel and carburetor fuels in all districts

--qualifying guidelines for the central and territorial as well as the integrated administration, planning, accounting, settlement and minimization of transportation.

Among the 250 findings by the ZFIV in 1980 and 1981 there were 50 transportation-organizational and technological solutions; 52 economic and administration-organizational proposals in addition to 28 studies, expert opinions and long-range development plans which contributed to an improvement of territorial efficiency by means of more favorable transport relations. All transportation science research should be aimed even more than heretofore at optimizing branch and territorial programs. Transport optimization will help them succeed, if we manage to overcome the barriers of district borders while observing the existing supply networks. These possibilities show that it will be necessary in the future to make even fuller use of the need for optimal branch-territorial organization and integration on the basis of the potential inherent in the societal reproduction process so as to achieve economic optimization of the transportation system. The "proposals for implementing the 10 priorities in the economic strategy of the economy" worked out by the ZFIV in May 1981 indicate together with the transportation-political goals and guidelines for guaranteeing a sharp rise in the performance of the economy that the optimization of the transport system must be based even more than heretofore on territorial rationalization. The activities of the leadership cadres of the central transportation administration (MfV), of the districts and the transportation conferences in all districts have made a major contribution to the preparation and implementation of more effective means of reducing transportation needs and rational transport systems in all branches, areas, combines, factories and territorial units (Kreis, city, community, cooperative associations). Scientific-technical findings were utilized to achieve these goals. The sum total consisting of efficiency and optimization of the reproduction process, of transportation within the territory and its regional units and of transportation rationalization all contribute to optimal economic efficiency.

In the collectives of the ZFIV, all efforts are based on the action program of the SED basis organizations and socialist competition and are being concentrated on developing initiatives and ideas that will assure the fulfillment of transportation tasks at the lowest possible cost.

FOOTNOTES

1. Documentation on SED Economic Policy. Proceedings of 10th Party Congress:
--Economic strategy, pp 143-148
--Main directions of scientific-technical work. Goals and tasks for science and technology pp 174-190
--Tasks of transportation and communication pp 242-245
2. "The Tasks of the Transportation System in 1982," DDR-VERKEHR 15 (1982) 4, pp 112-114

3. W. Lindner, "Main Directions of Transportation Research of the ZFIV of the GDR," DDR-VERKEHR 4 (1981) 1, pp 9-11
4. O. Reinhold, "Advantages of Our Society--Driving Forces of Scientific-Technological Progress," EINHEIT 36 (1981) 12, pp 1190-1198
5. O. Arndt, "The Tasks of the GDR Transportation System during the 1981-1985 Five-Year Plan," DDR-VERKEHR 14 (1981) 6, pp 185-188
- H. Egemann, "The Transportation System of the GDR as a Factor of Productivity and Growth of the Economy," DDR-VERKEHR 14 (1981) 6, pp 189-192
6. "Transport Optimization," DIE WIRTSCHAFT No 2/1982
7. This study was presented in connection with the following articles appearing in DDR-VERKEHR 4/1981, pp 126-131; 9/1981, pp 303-307; 11/1981, pp 368-371 and 11/1981, pp 42-47
8. "To Succeed Is an Obligation," EISENBAHNPRAXIS, 6/1981 pp 274-278
9. H. Hoffmann, "Effective Partnership between Rbd Erfurt and ZFIV," in FAHRT FREI 10/1981
10. E. Heinz, "Territorial Rationalization as a Growth Factor," DIE WIRTSCHAFT 1/1981
11. Authors Collective, "Integrated Transport Development throughout the Territory--Experiences, Examples and Tasks," transpress, VEB Publishing House for Transportation, Berlin, 1979
- W. Lindner, "Integrated Transport Development and Territorial Rationalization," DDR-VERKEHR 13 (1980) 3, pp 76-79

9478
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LONG-TERM MARKET PLANNING NECESSARY TO MEET COMPETITION

East Berlin TECHNISCHE GEMEINSCHAFT in German Vol 30 No 6, Jun 82 (signed to press 3 May 82) pp 19-20

['Market Research' feature article by Prof Dr M. Winkler: "The Competition of Innovations." The SED Central Committee Seminar for combine general directors, referred to below, was held in Leipzig, 8 April 1982]

[Text] In their exchange of experience on the occasion of the Central Committee seminar in Leipzig, the general directors of the combines and enterprises agreed that only strict and objective criteria can be made the standard for scientific-technical tasks. Under conditions of the most intense competition, the structure of production and export is to be shaped in such a way that highest foreign exchange earnings are attainable. This includes, among other things, the consideration of foreign market requirements already during product development.

In the national economy of the GDR the foreign trade effectiveness of innovation processes plays a special role because of the high intensity of foreign trade: Approximately 30 percent of the national income, 20 percent of the production of industrial goods, and 47 percent of the distributable end product are exported and are made capable of reproduction via import.

The high export growth envisaged for the period 1981 to 1985 is possible, under the complicated conditions prevailing on the foreign markets, not only through the expansion of the export volume, but above all through an improvement of the export structure in favor of high-quality goods that are in conformity with scientific-technical progress and profitable with respect to foreign exchange earnings.

Variants Improve Market Chances

The growing exchange of new products has at the same time become an inherent component of the development in international commodity markets and has changed the factors of competition in the capitalist markets: From price competition to competition of innovations. And thus in trade with the capitalist countries new products have become a factor in the stability and continuity of export.

The products, therefore, must meet market requirements and must be introduced in the markets at the right moment. The market requirements result from the needs of clients based on the application of the most recent findings of science and technology. However, they are very different depending upon the different production and reproduction conditions of the users (for capital goods) and the differentiated development of individual needs (for consumer goods).

Frequently these requirements stand in opposition to a rational production. The development of one or more basic variants and different supplemental variants for individual products and a further standardization of components and building units, as well as the specialization of production on a national and CEMA scale is a way of solving this contradiction.

When product development is directed only towards a case of application and a special construction is envisaged afterwards, this not only causes increased costs, but also entails losses of efficiency in export. The reconstruction requires time, which the competition uses to its advantage.

Client Structure Requires Attention

For the research and market spheres that means, first of all, determining the long-term goals, the strategy of product development and client structure of export. Both must take place in close reciprocal action, as it was done in the 7th October Machine Tool Combine for a new series of machines, whose development concept was tested on the basis of the probable demand of the main clients abroad, with the marketing organs abroad being included.

However, it must also be taken into consideration that product development also changes client structure or vice versa: Requirements which concentrate the client structure of export influence product development in a certain direction.

This problem becomes clear when high-performance machines and machine systems must be developed which, not only because of their output capacity, but also in regard to the necessary investment funds, can most of the time be used only by a certain group of purchasers (e.g., heavy industry). Prior to beginning such development plans, therefore, the absorption capacity of the existing clients, the possibilities of changing the client structure, as well as the competitive conditions prevailing in the markets must be subjected to precise examination.

Smaller clients for the most part are only prepared to recognize and pay for the part of the use value of a product which they can utilize in their sphere of application.

Product and market strategy must be planned on a long-term basis. This does not counter the demand for flexible adaptation to changing market requirements. However, precisely this flexibility is possible in unity with efficiency only on the basis of a stable product assortment. Unfortunately, one repeatedly notices in economic practice that flexibility is confused with

operativeness, which is always connected with efficiency losses in production and marketing.

If the product assortment is determined strategically, the point of departure must be that the future product as a whole must conform to the market requirements. That includes its individual components and frequently also necessary accessories. What must be demanded, therefore--in regard to the supply industry and other cooperating partners--is that the development and future production of the product be secured on the inside as well. The experiences in cooperation with the cooperating partners are varied in this regard.

For the export of furniture, for which, for example, the hardware items play an important role, the Unterschoenau VEB Green Heart, with its imaginative research and development, proves to be a stable cooperating partner. In other cases and with other products, price losses in the export business must be tolerated because of insufficient long-term cooperation with the supply industry and lack of initiative there.

Take Into Account the Time Factor

The highest prices can be attained in the foreign markets as long as the product is ahead of the competition. Its prompt introduction in the market, moreover, assures stable sales over the long term, whereby it is possible not only to cover the expended costs for research, development, production and entrance into the market, but also to attain the necessary profit.

Market analyses show that in combines and enterprises of the GDR large efforts are being mounted to organize product development and transition to production in such a way that the new product has an economically realizable advantage over the competition.

To be sure, there have also been cases where it was ascertained that new products were offered to foreign clients occasionally 3 to 4 years too late. With a marketing period at present of 5 to 6 years in many cases, the goods reach the market at a time when the period of market growth has already been passed and the demand is stagnating or declining.

And thus the products--although they are new for the GDR--become mass products on the foreign market and encounter a broad competition. They no longer command top prices and the costs of entering the market are high.

It is the task of foreign trade enterprises and the market spheres of the combines to accompany each innovation process from its conceptual phase through the defense of the duty books to the transition into production, to test the development constantly against market requirements, and, if necessary, to change the development process. In some combines--for example, in the Jena Carl Zeiss VEB Combine--it is already customary for no product development to be undertaken without the consent of the foreign trade enterprise.

As a prerequisite for product development a very precise knowledge must be gained concerning the potential users abroad and their concrete production and investment problems or their requirements. Market research must determine the moment for the product to be on the markets.

Among the market data there is an increase in the share of scientific-technical and technical-technological or such data which influence the scientific-technical solution which is right for the users. The best results are obtained where technical and economic cadres jointly carry out the market investigations.

Market research fulfills its tasks most effectively if it occupies the appropriate position in the administrative process. In so doing it is insignificant whether the responsibility for market research lies with the foreign trade enterprise, the combine administration, or the research center.

What is decisive is the fact that a rational division of labor takes place under uniform direction whenever market information is collected and the information is secured in a purposeful manner as the basis for administrative decisions. The processing of the information, the working out of analyses, studies and proposals submitted to the administration should take place centrally in an appropriately attached structural unit of market research.

8970
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HUNGARY

ROLE OF ENTERPRISE 'SUPERVISORY COMMITTEES' DISCUSSED

Budapest FIGYELO in Hungarian 15 July 82 p 5

[Report on a Roundtable Discussion Organized by FIGYELO by Dr Gyorgy Varga:
"Enterprise Supervisory Committees"]

[Excerpts] Modernization of inter-enterprise relationships and a supervisory agency practicing proprietary rights are on the agenda of efforts to renew the enterprise organizational structure. Another part of this "package plan" is renewal of the activity of enterprise supervisory committees [SC].

The editorial staff of FIGYELO organized a round-table meeting to evaluate the current work of the SC's and to discuss future tasks...

To begin: the theme brought about animated debate among the participants, and the opinions on a few questions were quite diverse. The SC's are a regulation regarding state enterprises, but also arose as a topic of debate in connection with the organizational preparations of the Ministry of Industry; this indicates that we are dealing with a topic of concern. The debate is also understandable in the sense that many are wary of increasing supervision which is already excessive. The representative of one medium-sized enterprise said that for example, in 1981, there were 113 supervisory days at his business and he was forced to expend his best efforts in writing reports. He also noted that annually, two or three agencies will examine the same subject, without knowing the results of each others' studies.

The importance of this subject is indicated by the existence of 65 SC's in the Ministry of Industry alone, with 522 members, 316 of whom are members of directional agencies. Differences of opinion were even apparent in analysis of the SC's' work to date. The majority felt that the committees have been helpful in uncovering management insufficiencies; they have regularly examined enterprise economic and development activities and their effectiveness; in general, the SC performs a good service, because its ideas and forward-looking suggestions aid the enterprise in its management, or even in its development. The SC also performs an important role for the supervising ministry, if only because the functionally separated divisions of the

ministry cannot be familiar with the enterprise in a broad comprehensive way. Only the SC can perform a thorough evaluation.

Diverse Judgements

Others hold that the SC is not familiar with the production structure of the enterprise, its products, and even less, it markets: it performs few on-the-spot inspections, and never goes farther than the central plant; the SC meets quarterly or whenever it must make a report; the bulk of the report consists of the summary that the enterprise provides; the SC is rarely able to make suggestions that the enterprise can implement, since they usually call attention to the general goals of the economy or are speculative in nature.

It was pointed out in the debate that what kind of SC and enterprise "gets", in terms of its individual makeup and suitability, is also a matter of chance. Thus we must seek and utilize those guarantees and institutional safeguards which minimize the chance factor.

Similarly diverse opinions were expressed regarding the future activity of the SC's. Some suggested that the SC should be assigned official or quasi-official authority; it should participate in planning the enterprise strategy or at least offer an opinion on it; it should debate enterprise conceptions of organizational changes and present a viewpoint in questions regarding the development of the enterprise's internal mechanism; it should also present an opinion and exercise the veto power in appointments, discharges, and in the evaluation of directors; primarily, the SC should supervise the effectiveness of investments.

In these remarks, advice from directors (who make strategic decisions, participate in them, and operate as agents of the enterprise and a part of its management) and the basically supervisory tasks of the SC's actually combined.

Some suggested that a requirement for effective operation of the SC is that it be a body of the enterprise and a part of its work, as in business partnerships and cooperatives. Conflict between the SC and the enterprise (or its possibility) can only be resolved in this way, they said.

A few were concerned that the situation of the SC cannot be separated from the economic planning system: in itself, it cannot be modernized. The institution of the SC is inseparable from comprehensive modernization of the organizational system of proprietary institutions and the method of practice of the stockholding function.

In the course of the discussion, a consensus was finally reached: we can count on modernization of the proprietary system--as a long-range prospect. Yet even in the present framework of economic management there is a possibility for development of the SC institution, in particular, so that it will be in accord with the direction of anticipated broader modernization.

Non-enterprise Agency

The SC operates on authority from the supervisory body, and thus is its agent, and not an agent of the enterprise. In practical experience, this does not cause conflict between the enterprise and the SC, because their relationship is regulated by law. In addition, this circumstance permits the creation of a board of directors: the functions of the two bodies are well separated, and one does not preclude the operation of the other.

The SC performs supervisory and evaluative functions under authority from the supervising organization, which sets its expectations of the committee in directives.

The activity of the SC should primarily be extended to comprehensive economic supervision. In general, this means that the legal regulations in effect from 1968 to the end of 1977 should again be adopted. At present, the supervisory economic inspections, permitted at most every 5 years, fall outside of the SC's range of authority. It is suggested that this comprehensive inspection and evaluation be added to the authority of the SC. In other words, we are not speaking of an increase in the number of inspections or multiplication of parallel inspections; we mean that the SC should perform this work for and instead of the ministry. The SC would fill the inspecting function of the founding agency.

It follows that the SC should not perform any functions which could reduce the authority or the independence of the enterprise director. In addition, it was mentioned that the supervising agency (its director) cannot make binding decisions for the enterprise on the basis of the SC's reports. However, the agency can make recommendations on the basis of information contained in the SC report; it can call the enterprise director's attention to weighing that information in his decisions; and the SC, in the course of its work, can evaluate if the director corrected the economic mistakes that were pointed out to him.

Thus, protection of the enterprise's independence requires that the SC's authority not be broadened past the right of counsel. Potential rights of decision or veto would threaten the autonomy and power of the enterprise director as well as the objectivity of the SC in its inspections. Also for this reason, the participants in the debate dismissed the suggestion that the president and vice-president of the SC be given personal economic interest in the medium-range activity and managerial success of the enterprise.

The SC, as the agent of supervision, should form its forward-looking opinion of the enterprise and the work of the directors on the basis of its experience in inspection; however, it should not give a direct opinion on the enterprise strategy or plans for development. The SC would do this without accepting responsibility or risk, and thus would bring itself under obligation just like the supervising agency which announces its "expectations". At the same time, expansion of the SC's activity to economic supervision can provide a better means of performing forward-looking and comprehensive analyses and evaluations of longer time periods.

It is useful to expand the SC's function to activity which approaches supervision, but does not interfere in its objectivity. For instance, this can be analyzing the work of the directors of the enterprise; offering recommendations for their complex remuneration, premiums, or perhaps their basic wage; even advising in the discharge and appointment of the SC directors. It is possible that with time, some proprietary functions can be transferred to the SC.

As a consequence, the SC should direct attention to the main areas of enterprise activity and direction and the sensitive issues of any given time, and not examine useless details. It should not concentrate on examination of operative policy.

In the debate, a question arose: can more than one enterprise share one SC? The majority of the participants dismissed the question. The notion that the representative of a rival company or even of a contractually related enterprise should sit on the SC aroused especially sharp objection. It is hardly conceivable that one SC could offer high-quality supervision of more than one enterprise, since the available experts would become overburdened. In opposition to this argument, it was pointed out that the one SC many enterprises principle is at work in the trusts. In addition, all nine coal-mining enterprises are supervised by one SC, because comparison among them is only possible in this way. It was also argued that due to the shortage of specialists capable of SC work, the possibility that one individual could participate in more than one SC is unavoidable.

Reluctant Banks

Concerning the individual makeup of the SC's, the participants primarily emphasized that only those specialists whom both the enterprise and the supervising agency trust should be selected. This opinion also contradicts the possibility that an SC could be shared among enterprises.

The effectiveness of the SC's work largely depends on the ability of its president to offer an opinion on potential members, and in some cases even employ the right of veto. This does not imply that the SC president decides the membership of the committee; the decision belongs in the authority of the supervising agency.

The membership of the SC largely reflects the nature of the enterprise. It is generally proper that financial, price and technical specialists with some enterprise experience should participate. Representation of supervisory and functionary ministries can be accomplished in the SC even by specialists who are not their employees. Because of the present membership situation at the ministries, such representation will be a necessity.

The debate participants did not find the reluctance of banks to deal with the SC's understandable. They felt that cooperation can be mutually useful to the banks and SC's, especially when the financial vulnerability of enterprises and survival of bankruptcy becomes an issue.

In past experience, the participation of the representative of the enterprise trade union has been required; it would be more useful to have the industrial trade union represented in the SC.

The participants agreed that highly experienced, retired but work-capable specialists should be included in the SC. At present, 64 retirees belong to the SC's of the industrial ministry.

The members of the SC presently receive a nominal salary, but under present circumstances equal pay is not desirable. It was suggested that the president of the SC should divide the available honorarium in proportion to the amount of work performed by each member.

Finally, the prestige of the SC was discussed. It became apparent in the debate that its prestige cannot be increased by decree. However, the SC will become more respected when it performs economic supervision and its opinion is sought in evaluation, appointment and discharge of enterprise directors. This objectively strengthens the SC's prestige. Everything else depends on the appointed individuals, their planned and specialized work, and their interaction with enterprise directors.

9890
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FURTHER DEREGULATION OF INVESTMENT ACTIVITIES BEGINNING 1983

Budapest FIGYELO in Hungarian 29 July 82 p 5

[Article by Dr Ferenc Nemeth: "Greater Independence, Greater Responsibilities"]

[Text] Recently, the Council of Ministers and the State Planning Commission took up the question of updating the statutory provisions governing our system of investments and decided on a series of important--and since the promulgation of the decree in 1974 perhaps the most far-reaching--changes.

The goal of these changes was to help allow existing spheres of decision-making and the responsibilities connected with them to more clearly assert themselves, to enhance the strengthening of the business-like aspects of investment activities and to help simplify procedural rules.

Obviously, the success of these general requirements does not depend on statutory provisions alone. In order to achieve these goals, i.e., to more effectively assert them, we also need a comprehensive program for making further improvements in the national economic planning of our investments and in their decision-making and financial system, which is in accordance with the other elements of our economic mechanism. Even before this, however, it is both possible and necessary to carry out certain legislative changes which within the existing system of investments will make its operation simpler and more effective.

Some of the more significant principles, i.e., reasons behind the changes that are to be put into effect starting 1 January 1983 are as follows:

Decision Making and Decision Preparation

Our experiences have shown that the mandatory work-programs prepared for large-scale investments (and also for more significant targeted and other types of state investment programs to be implemented according to the same regulations) have been ineffective in helping us organize and simplify our preparatory work. Therefore, all mandatory regulations pertaining to preparatory work programs have been eliminated. The task of planning and organizing the decision-preparatory phase of large-scale investments has been turned over--without any restrictions--to the investing enterprise.

There has also been a change in the rules for submitting investment recommendations. The submission of development goals requiring economic policy decisions for approval will continue to fall within the domain of the overseeing agencies. At the same time, in the case of large-scale productive investments it is the investing enterprise which draws up (or has somebody else draw up) the investment proposals containing the specifics of implementation, and it is the one which coordinates and submits them to the State Planning Commission. The head of the over-seeing agency also issues an impact report on the investment proposal from the point of view of national economic and branch policy relationships.

This report is sent before the State Planning Commission together with the investment proposal. In case there is a difference of opinion between the enterprise submitting the investment proposal and the ministry, this conflict is decided by the State Planning Commission.

The system for large-scale non-productive investments--in view of their intra- and inter-branch relationships--is the same; the responsibility for such investments belongs to the overseeing agency throughout the entire period of preparation, approval and execution.

Regulations regarding the coordination of investment proposals have been simplified. Earlier rules allowed many questions to reach the control agency level which typically belonged with the realm of enterprise relationships or which required action by the investor. (These included such things, for example, as ensuring the necessary building capacities for implementing a given investment project, providing the necessary work force to operate that project, determining the marketability of the product it intends to produce, preparing price-forecasts, etc.) According to the changes, these will fall within the competence of the enterprises.

At the same time--pursuant to the practice that has evolved over the past two years--our circle of advisory agencies have been expanded to include the National Committee for Technical Development and the Hungarian Academy of Sciences. The idea behind this was to use the expert opinion of these agencies hopefully to strengthen the scientific basis of investment decisions.

In the case of enterprise investments it is the investment charter which helps to insure that the factors considered in the course of preparing and making a decision are properly founded and that significant data decided upon in the course of decision-making (such as investment costs, financial resources, etc.) are properly recorded. This will remain unchanged also in the future. In order to increase enterprise independence, however, changes have been made in the rules for coordinating and reporting on investment charters. According to the statutory provision, it is the enterprise manager (or in the case of cooperatives, the appropriate corporate organ) who is responsible for the preparation of investments, for investment decisions, for working out the necessary conditions for implementing and operating the project as well as for continuous supervision over the investment project.

In the past, this principle could not come into full display in the case of investments which required preparation of a charter (and practically every development that was of any significance fell into this category), because--in order to allow them to report on it--the control agency and the executive committee of the local council also had to be sent a copy of the charter's draft. According to the regulation, the main question on which the control agency was expected to take a stand based on the information obtained from the charter's data was whether or not the completion of a given investment project served the goals of our national economic and branch-development policy.

Although the statutory provision did not require the control agency's opinion to be taken into account, in practice there were not many cases in which an enterprise proceeded to go ahead with an investment project which in the judgment of the ministry did not serve our national economic and branch-development policy goals. In order for enterprise independence and the responsibilities connected with it to more clearly assert themselves, the ministries' right to make an impact report in such matters has been practically eliminated. According to the new regulations, the rule which requires enterprises to send charter drafts to the control agency for a preliminary opinion applies only to a part of the investments constituting our central development programs, i.e., to those which exceed the 500 million forint level in estimated total expenditures.

What this change in the statutory provision means basically, is that in the future state influence on enterprise investment activities will have to be exercised mainly through the means of national economic planning and regulation. Starting 1 January 1983, therefore, we will have to build up and more consistently use our state subsidy system to insure that the general goals of our investment policy, our central development and other state-sponsored programs and development projects connected with the fulfillment of our international obligations are more efficiently realized than before.

Strengthening Business

According to last year's resolution of the State Planning Commission, investment projects should be implemented by strengthening their business-like aspects, i.e., by making the system of "contracting" and competition more universal.

Obviously, in the process of implementing an investment project it takes a while for these various business forms to become universal. For business and competition to develop--while trying to permanently reduce overheated investment activities--a broad range of legal, incentive-promoting and organizational measures are needed, together with a lifting of a whole line of restrictions presently in effect. Efforts to achieve this goal are already under way, and just recently several--mostly legally oriented--decrees have been issued to the same effect.

In addition to all this, it had to be ensured that these business development-promoting changes and simplifications are also asserted in the various

statutory provisions pertaining to our system of investments. This was necessary because some of the regulations put forth in these decrees were not in harmony and even markedly hindered the assertion of business principles.

We had to moderate our strict regulations regarding the starting conditions for investments. This was necessary because these restrictions were hindering business development, the reorganization of tasks related to its implementation and essentially all efforts to get our contractors and investors to assume as great a share as possible in completing a given investment project and to reassign certain tasks from the investors and planners to the contractors.

Some of the regulations that were rescinded made the establishment of the starting conditions virtually exclusively a task of the investor. Obviously, this was not in harmony with the spirit of business, although it would be desirable if a part of these tasks were turned over to the investors by way of business contracts. For example, the task of preparing (having somebody else prepare) the net-plan of implementation--process organization--and the work program of investment projects could be given to the contractor instead of the investor; and the task of obtaining official permits for the implementation and starting-up phases should fall not only on the investor but also on the contractor, etc.

In the future, investors will--by prearrangement--have to give planning and potential building (i.e., technical assembly) enterprises an increasingly greater say in their decision-making if they want to base their investment decisions on more solid foundations.

As business principles have become increasingly more narrowly defined, contractual constraints, i.e., the number of tasks to be performed by appointment, have also continued to narrow. General contractual constraints pertaining to large-scale investments, in other words to significant targeted and other state-sponsored investment programs will be eliminated. Starting 1 January 1983 these types of measures could only be considered in an extremely limited number of cases, i.e., in the case of a few development projects determined by the Council of Ministers.

Simplifying the Rules of Procedure

Some of the changes expounded above will also bring with them a simplification of the procedural rules. (Eliminating the preparatory work program, restricting the process of mandatory reporting, relaxing the starting conditions, etc.) In addition to all this, in the interest of simplification it was also necessary to review the supplements and specimen sheets attached to the statutory provision and to eliminate regulations which do not fully contribute to strengthening the basis of investment decisions. The changes and simplifications affecting the financing of investment projects were also made primarily with this goal in mind. The restrictions regarding the financing of state investments will be slackened in the future and the mandatory requirement to show sufficient financial reserves will be eliminated. The reason for this latter move is that this matter can be taken care of

partly among the enterprises themselves and partly between the banks and the enterprises.

The announced legislative changes have been aimed at those basic decrees which regulate our system of investments. In accordance with these changes, in the near future we will also have to review the investment systems of our agricultural and forest economic organizations as well as the investment rules (regulations) of our ministries and our megye (capital city) councils. In the case of these latter, it would be expedient to rescind those statutory provisions which cannot be rescinded, justified changes and innovations should be implemented in such a way so that their effects on the preparation and execution of investment projects can be felt as early as 1983.

9379
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OFFICIAL ANALYZES PROBLEMS OF SUPPORT INDUSTRY

Budapest FIGYELO in Hungarian 22 Jul 82 pp 1, 7

[Article by Adam Juhasz, state secretary of industry: "The Situation of Our Support Industry"]

[Text] Much is being said nowadays about the situation of the domestic support industry*, about its relative backwardness, as a factor that limits the performance of industry manufacturing the end product.

But sometimes many people look for this as the fault even in cases of other shortcomings that exist at production units: lack of organization, unsatisfactory inventory management, etc., even though it is undoubtedly true that our support industry falls significantly short of the demands of the user industry.

Large Enterprises--Short Production Runs

Thus, a complex question is involved here, and if we interpret the concept of support industry a little more generally, then a rather broad circle of the industry's activity must be listed here since it can also be said of most so-called end products that they serve as the technical support for the social processes and within this for industrial production processes. This background regenerated for itself by industry as a whole leaves quite a few things to be desired.

The stabilized character of the worldwide growth of specialization and work distribution further expands the circle of industrial support activity. This is how, for example, the earlier Raba railroad car and vehicle factory became a typical support enterprise for the vehicle industry.

Interpreting the multidirectional movements, it becomes immediately obvious that industry cannot be rigidly divided into a capitalized "Industry" that is,

* Based on the author's presentation to initiate the debate, prepared for the Industrial Scientific Conference to be held in Szeged on 22-23 July 1982 by the Csongrad megye chapter of the MTESZ [Federation of Technical and Scientific Associations] and by the Southern Hungarian Coordinating Committee of the Hungarian Chamber of Commerce..

so to speak, potentially capable of the appropriate performances, and to a "Support Industry" that keeps holding it back at every step, forming sort of a shadow or mean ghost of it.

What is involved, then, when we speak of the backwardness of the support industry? The inappropriate structure of industrial production, which presents itself on two separate levels.

One, it is a well-known fact that the product structure of Hungarian industry--and especially of the machine industry--is too broad as reflected by the volume it produces. As a consequence, a significant portion of the many kinds of component parts and subassembly units needed for it must often run at far below the level of profitable production. This structural problem deriving from earlier excessive efforts aimed toward an end product orientation and autarky, in addition to breaking up the length of production runs and losing the advantages of assembly-line and mass production, and retarding technological levels, also hinders the development of specialized component parts manufacturing, and puts its stamp on the low level of involvement of our industrial support production in international trade.

Two, is inadequate enterprise structure. The industrial activity of the developed industrial countries is characterized by the sharply divided, pyramidlike construction of the enterprise structure.

In these structures, the activity of the relatively small number of large enterprises and trusts located at the peak of the pyramid is served by or supplemented by the large number of small- and medium-sized enterprises located in the middle of the field and specializing in narrow areas of the multitude of component parts, subassemblies and semifinished industrial products, while these latter, in turn, are also relying on the contributing activities and services of innumerable small and midget enterprises. This production structure with its high degree of flexibility provides the appropriate profitability and therefore a very good background for industrial production, even if production runs are shorter.

Unfortunately our production structure is not characterized by such deep articulation and this has also hindered the development of the support industry.

This was also joined by the fact that parallel with the development of the industrial branches producing end products, which received strong incentives, the development of industrial support branches necessary for these did not receive the needed emphasis and assistance. Two more factors are also worth mentioning which, through the sphere of sales, exerted their negative effects and to a large extent still exert negative effects today:

--the present formats of commerce do not satisfy the requirements of effective inventory management and sales;

--we do not have an information system and relay network capable of adequately relaying unsatisfied demand toward available capacities, and vice versa.

Beyond the support industry, a problem of the national economy is reflected in the situation that while production is stagnant or decreasing at many enterprises and while unused capacities are increasing due to the effect of developments, the behavior of the enterprises on the domestic market has not changed at all, the seller continues to be in command. Many producers, including those in the support industry with mostly free market prices, are able to achieve increasing profits even with stagnant production. Here the force of economic necessity is not functioning effectively.

Unfulfilled Needs--Available Capacities

This is how the present situation of our support industry has developed, which can be characterized by the following:

--preliminary products, for example, rolled products, castings, wrought and stamped products are made generally in poor quality, with large allowances and without precision;

--our enterprises specializing in the production of component parts, subassemblies, and fastener elements are unable to completely fill demand either in quantity or quality. For example, this year's value of the screw orders placed for import is more than \$10 million...

--specialized tool production can satisfy only about two-thirds of demand, and thus our capitalist tool imports reached \$40 million in 1980, which amounted to almost 45 percent of the output of the specialized manufacturing enterprises.

But a large share of the imported products could also be made in this country since the level of exploiting the support industry's capacities built into the verticals is low, very often it does not even reach one shift, and thus unfulfilled needs and available capacities are present simultaneously on a lasting basis, which in addition to replacing the imports, could also provide a way for profitable exports.

In September 1980 the Council of Ministers passed a resolution, and following that the GB [Economic Committee] prescribed concrete tasks for the Ministry of Industry and its associate organs for developing the support industry. The Ministry of Industry and the associate organs have taken a series of important measures in order to implement these tasks. I will mention here only the following ones from among these:

To develop the support industry, the financial organs in accordance with loan policy guiding principles have thus far awarded about 1.5 billion forints in loans and 400 million forints in repayable basic state grants. However, it ^{present} must be emphasized that in the present economic situation there will be no way of making state subsidies for the development of the support industry, and financial organs will be able to make loans even to industrial support enterprises only under the general competitive conditions prevailing on the loan market.

The Ministry of Industry can support only those enterprise efforts which do not require major investments and which are aimed at exploiting existing capacities and eliminating narrow bottlenecks. (The exploitation of reserves that exist in the cooperative industry and at agricultural facilities, and which can be opened up by expanding cooperation between the socialist countries, are also included in this.) Besides this, it is also necessary to enlist small enterprises in the interest of fulfilling the needs of the support industry.

The industrial support coordinating committee created in the Ministry of Industry is keeping this in mind in its operation.

An agreement has been reached between the Hungarian Railroad Car and Machine Factory [MVG] and the Screw Manufacturing Enterprise [CSIV], according to which the MVG agrees to produce for the CSIV about 800 tons of highly tempered screw thread fastener products (valued at \$1.2 million) in long production runs, by including in the production the screw thread fasteners producing capacities built into the vertical but previously overloaded by many small internally needed items. In exchange for this, the CSIV--using its TEK [Full Supply Capability] function--will fill the MVG's needs for the many types of small-volume items by import.

The Ozd Metallurgical Works submitted their bid to the financial organs to introduce the domestic manufacture of springs that hold down the railroad's tracks. They were successful, and thus will replace annually about 100 million forints' worth of capitalist imports.

A Feasible Path

We have developed an information network in the interest of replacing capitalist imports and better fulfilling domestic needs. In addition to the Support Industry Information Organization Office, a small enterprise that has split off out of the NIMIGUSZI [Ministry of Heavy Industry Institute of Industrial Economics and Systems Analysis] and the capacity exchange established with similar functions in the MHE [Hungarian Shipping Association] Computing Technology Center, the referral enterprises and organizations built into this network, which also perform brokerage activities, have accepted very serious roles.

Based on the specific unfulfilled needs identified in the various trade groups of the support industry--with the cooperation of this very referral network--significant initiatives have already been taken to involve the cooperative industry by providing it with technology and machinery.

The manifold nature of the cooperative forms and the variety are well illustrated by two examples:

--Under the joint management of IPM [Ministry of Industry] and the OAAH [National Material and Price Office], an organization needed to improve capitalist import components parts by stacked [felrako] welding, was established at the FERROGLOBUS [Iron and Steel Production Equipment Trading

Enterprise] with the collaboration of three agricultural producer cooperatives. This will render unnecessary the import of significant quantities of component parts;

--under the management of the IPM and the OKISZ National Federation of Artisan Cooperatives, an association has been created with the participation of the Danuvia, Ferroglobus, and the Kobanya Tool Manufacturing Cooperative to divide the manufacturing of forming-die housings, and to inventory and sell them.

There are now very many examples to prove that more than just the theoretical possibility exists for more vigorously involving existing capacities and the cooperative industry, the agricultural producer cooperatives, and the small enterprises in industrial support production. This is a path that is possible also in practice, on which more and more enterprises are embarking with our cooperation, urging, at times even nagging, but more and more often even by their own initiatives. I could word it this way: there has been some movement in this area, the technological and business thinking of the enterprises has accepted and is beginning to become friends with these new formats and methods, and the initial practical steps are encouraging.

8584
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SPECIALISTS DISCUSS IMPLEMENTATION OF AGRICULTURAL POLICY

Warsaw ZYCIE GOSPODARCZE in Polish No 20, 6 Jun 82 pp 1, 6, 7

[Roundtable discussion organized by ZYCIE GOSPODARCZE: "As the Economy Goes, So Goes Agriculture"]

[Text] A roundtable took place concerning the problems and conditions of the agricultural policies in the near term and in the more distant perspective. Participating were: Dr Mieczyslaw Bojarczyk, vice chairman of the Provincial Administration of the Rural Youth Union [ZW-ZMW] in Lublin; Michal Losiak, farmer, Jaktorow, Warsaw Capital province of Warsaw; Prof Dr Ryszard Manteuffel, Central School of Rural Agriculture-Agricultural Academy [SGGW-AR], Warsaw; lecturing Dr Zbigniew Mikolajczyk-Institute of Finance; Eng Adolf Swies, Strzykuly, State Farm [PGR] director; Dr Jozef Zuk, Central School of Rural Agriculture-Agricultural Academy [SGGW-AR], Warsaw, and representing the press: Marcin Makowiecki and Karol Szwarc.

Press: Regarding the first plan, a question arises regarding the present state and changes in the agrarian structure of agriculture, and in this most desirable model of private enterprise, today and in the future.

J. Olejnik: I propose, however, that we begin by testing the evaluation of our present situation. For this will reflect upon the character of our discussion. Let us establish specifics.

Press: And so let us commence with an evaluation of the situation.

J. Olejnik: Various opinions are in circulation regarding the actual status. Generally, everyone refers to the Central Bureau of Statistics [GUS] data. It discloses, for example, that in the private sector, there are 16-17 million hogs, but the shelves in the meat shops are bare. If there were 17 million hogs in Poland, we should not have any problems with the meat supply. The quantity of grain from harvests of past years is estimated at 20 million tons. If we were to take into account the fodder supply emanating from this, a riddle arises--together with potatoes, we have practically the same amount of fodder designated for the hogs as does the FRG, but a much smaller production of meat. And so, where is this fodder lost? We do not really have that much of it, or we have it and ruin it, waste it.

M. Losiak: Only 1 month ago, I was one of the largest private producers of hogs. Today I am not--there is no fodder. In the market place there are many disturbing phenomena. I am concerned about the free market price of grain, piglets, shoats, slaughter hogs. Recently it was quite evident that the price of piglets fell sharply during a period when it should be rising. Invariably prespring prices for piglets rose; the farmers having bought them up to fatten. It is not so today, For example, in the voivodship of Siedlce or Biala Podlaska, a pair already sells for 2,000-2,500 zlotys; an excessive supply, or a lack of interest in breeding? It is similar with potatoes--there are none, even in the barrows. The same applies to grain. Among other things, it was for this reason that the grain loan was not retired.

In agriculture, there can be observed a clear declining tendency. And this is not the result of a crisis in the nonagricultural sector; shortage of machines, manure, or also unprofitable prices. Last year I could produce 4,000-5,000 hogs. At this moment, I have empty pig pens because of the lack of fodder. Production in highly marketable commodities, formerly called specialties, is diminishing. Giving witness to this are the results from the voivodships of Poznan, Leszno, Bydgoszcz--traditionally strong agricultural regions.

A. Swies: I agree that we lack full perception of the situation regarding production. I shall give one more example: poultry. In January, February, we recall, there was rumbling, fear, that there would be no eggs. This appeared to be a prologue to the increase to 16 zlotys in price per egg. I considered, and consider today, that this price was unfounded. And what is the situation today? There is tremendous overproduction. The price dropped to 8 zlotys, the lowest being 4 zlotys. Therefore, most likely, there is no real evaluation of the situation regarding production, for whence in the course of not quite 2 months have we arrived at overproduction from a tremendous deficit? And now let us observe what the consequences will be. From the point of view of our industry --we have an egg-laying chicken farm--at this moment I see the necessity to withdraw from production.

I noticed that other producers are also begining to curtail animal production, because a comparison of the cost of procurement of crops, together with its conversion into meat, clearly negates any profit on the latter.

J. Zuk: At present, when we began the agricultural reform, problems arise, because those farms which for various reasons previously enjoyed very profitable conditions of production, are presently undergoing a period where those conditions have ceased to work. This pertains, among others, to the farm of Mr Losiak. There were few such farms in Poland, but they were taken into account, because of their high production. We provided them with the means of production, primarily fodder; the investments were substantial. They realized huge incomes from this--a half million or more for one so engaged. Today, they are in a difficult situation.

W. Michna: The fundamental sizes of production were called into question. Do we have 20 million tons of grain; do we have 40 million tons of potatoes, etc. Extreme estimates abounded that we have one-half or perhaps one-third less. And I have doubts whether the estimates drawn up by GUS are accurate, but it

would be difficult to acknowledge that the grain yields were so extremely low, to warrant an erroneous estimate by one-third. The same pertains to potatoes. Perhaps there is a mistake in the method of listing areawise--here larger errors are possible, however, I cannot admit to the possibility that we could have erred by 20 or 15 million tons of potatoes.

M. Losiak: Satellite photos indicate that we could have a grain harvest approximating 20-21 million tons. But how much of it was delivered to the warehouse? This is really the difference.

W. Michna: It is important to note when the crop is estimated. Is this a biological harvest or a warehouse harvest? Our method of estimating the grain harvest is oriented toward the "golden mean"--between the cutting and transportation to the barn. It is not, however, to be precluded that the losses can be somewhat greater than we believe. On the other hand, we do not include, with complete certitude, the silage losses in the total supply. Analyses conducted by various investigative sources state, for example, that 30 to 40 percent of the food value is lost at the time of its withdrawal from the silo. However, the supply most frequently fails to reflect this loss. This difference can be substantial. Nevertheless, however, taking all into consideration, the actual state of production is close to that reflected in the GUS estimates.

Press: Let us, however, return to the question posed at the beginning. Messrs Losiak and Olejnik manage farms whose production is large--specialized. A goodly number of similar enterprises sprang up in recent years, and were even for a certain time cited as models. There could even be heard opinions that the classical peasant farm--family farm as it is called--is a body of a temporary character; for many reasons, above all, socially and technologically, productive. Recent Sejm decisions clearly defined the continuity of private farms. But the problem remains, again--on this level, which was accepted by the Sejm--discussion is required on what the nature of the enterprise will be. And the second matter: How will intersector relations be arranged?

J. Zuk: Economic practice dictates the acceptance of a thesis which has been bandied about for a very long time, regarding equal treatment for all the socioeconomic sectors in farming. This thesis is already officially accepted, but for practical purposes we do not yet know how to execute it, because some continuously regard the private family farm as a temporary structure.

R. Manteuffel: It was not today that I encountered the thesis regarding necessary structural changes in farming. From the moment of the acceptance by the Sejm of the fundamentals of continuity of private enterprise, such a thesis cannot be officially advanced. If it can be encountered in some announcements, I regard this as the personal view of the individuals who are advancing it. I understand the Sejm resolution as having but one meaning: equal laws exist, and there also exists the stability of both sectors, the socialized and private. I cannot argue as to the greater effectiveness, as such, of the collective form as compared with the private form of production. The collective form gives results when a considerably greater scale of production gives greater effects, subject to the condition that collectivism will render a reasonable division of work.

J. Zuk: I agree that the changes introduced in the civil code concerning the continuity and stability of private enterprises do not require discussion from the point of view of structure. The family enterprise is also a socialistic enterprise. It does not involve a hired working force; it has all the possibilities of conducting expanded reproduction and introducing technological progress; it is fully and completely bound to the market of the state. It lends itself easily to inclusion in a planned enterprise; it is predisposed to internal incentives of every kind and it can easily change direction and intensify production. In conjunction with this, however, it will be necessary in the future, to caution the family-type enterprise, not to invest excessively in the premises in order to avoid a reversal at any given moment. Today a million, or rather, practically 2 million farms are not, for practical purposes, regular work facilities. Most of them are overinvested. Machinery is limited to a small area. Because of this, other forms, not bureaucratic, of socialized agriculture are also necessary; and hence, coproduction cooperation, common usage of machines, common animal production. We have discussed this for years; however, unfortunately, it was not done because of varied reasons.

M. Losiak: Deriving benefit from the presence of the PGR director, I wish to say, that recently, one can observe a combination of attacks on the PGR in an attempt to destroy the highly marketable commodities of large private farms. I am not concerned with the large, expansive farms, but only the highly productive ones. The type of enterprise I represent was included in the index. If now someone tells me that the attack on highly marketable commodities is a step toward collectivism, I will be in a position to understand this and not discuss it. But if there is talk of legal, lasting regulations concerning the status of private enterprise, then such proceedings are to me, to say the least, incomprehensible.

W. Michna: I would like to question what was stated by Mr Losiak, that we make life difficult for enterprises such as his. If at this moment specialized farms are not receiving fodder, it is not because the government wishes to drive them into collective enterprises; there is no such intention--we simply do not have fodder. We can question some inclinations, representing a bad remainder of the past, but let us argue from a position of good faith toward the agricultural policy of the nation.

M. Losiak: At the time when the farms, referred to as specialized, arose, we had no legal guarantee as to their continuity. Since I could invest money, in a measure preponderant to that of the state, into something bearing no guarantee; then now, even more so, such guarantees are not needed by me to achieve prosperity. Second, even if there be a constitutional registration concerning the continuity of the peasant farm, then likewise, someday the Sejm could enact a change.

W. Michna: In our past agrarian policy, the family farm was always regarded as the basis for employment and the upkeep of the entire family, without hired help. On the other hand, peasant worker farms employing half a person or one and one-half persons on the farm, although they are the mutual property of the family, they do not represent family enterprises. The concept of family enterprise is not a legal concept, but rather one of production. Whenever I speak of

the family farm, I think of it as representing the basis of full employment for the entire family. We have relatively few such farms. Furthermore, these numbers will not multiply rapidly. During the course of the next several years, little thought will be devoted to basic changes in the agrarian structure. Our wish and endeavor is to enlarge average farm facilities, but during the entire period of the crisis there will be few land-selling candidates. A substantial portion of the population returns to the village, and the working peasant will not sell his land because it represents the best capital investment; and in addition to that, it solves the food problem.

You ask here what is the ideal size of a farm? I would be fearful of inventing some sort of model and saying: "We shall strive to achieve this ideal," because in the foreseeable future, we must simultaneously increase production on both the peasant worker farm consisting of 1 or 4 hectares and on all larger family farms, because the possibilities for changes in the agrarian structure, as I stated, will be limited.

M. Bojarczyk: There are as many problems as there are farms. And in addition to this are regional differences. The present-day state of farming--the magnitude of its end product--is the result of the level of investment in this sphere of production, the intellectual level of the producer, which must, however, be reduced by the cost of errors committed and ineffective investment. At present, there has appeared a blockage against the development of productive forces in farming. Productivity of labor in industry is so low that it does not keep pace with the needs of the village. And industrial supplies will determine the production possibilities of farming. Moreso than the changes in agrarian structures which we are discussing here today. It is true that the laws of the market should decide the changes in the agrarian structure, but simultaneously, taking into consideration the social aspects which cannot be overlooked, we must reply to the question: Who will assure the people leaving the village of a place to work in the city? Furthermore, we will create an excessive army of officials.

M. Losiak: In my opinion, the only sensible criterion is the profitability of production. Can we think of anything more intelligent? Let us assume that today I can sign an agreement with some party from abroad for the sale of meat; and what is peculiar, in spite of the fact that I import fodder for dollars, it will, nevertheless, be profitable for me. Can you explain to me why, in such a case, my farm is to remain empty?

L. Olejnik: Because we lose this fodder somewhere else. Now the farms with directed, specialized production, derive the greatest benefit from the fodder. An enterprise of this type has at its disposal a building which maintains moisture, temperature, and, most importantly, the breeder knows what proportions of albumen to the unit of oats are required in the fodder. He benefits from this fodder in a most profitable manner, whereas the average producer does not. Although it is often said that he produces cheaply, it is not so. He consumes and misuses the fodder supply of the country. It is hence possible to agree that we produce so much grain and potatoes, but they are not effectively disposed of.

It matters that the owner of an 8-hectare farm should not have to produce a few hogs, but could for example, produce seeds for vegetables or sugar beets. Because he possesses the possibilities of obtaining top production with such facilities. On the other hand, the one who like myself has a large farm, should produce fodder. However, I have empty pig pens. I possess fodder, but I must sell it to the individual socialized farms, in order to pay my bank note. The Food Management Bank [BGZ] deducts my production. I do not want something for nothing from the bank. I wish to repay the money borrowed, but please give it to me without setting conditions. The bank, if it grants so-called working capital credit, sets such conditions that nothing can be purchased privately from a farmer, because there must be an immediate bill issued for this. But not everyone wishes to grant one. My production should speak for my creditability.

M. Losiak: Agriculture, according to the theories of some gentlemen, must produce without agrarian changes. My question is: What prices should the small farms receive as an incentive to produce? I agree with Professor Manteuffel that it is not necessary to discuss structural changes. But if we are to talk about what is to be done in the near future, in order to guarantee the nation a satisfactory quantity of food, then I regard this as worthy of discussion. In my real activity, after my transition to agriculture, I know this, that the model of the so-called family farm in general has not been proven. I am downright practical. With me production speaks. Up to mid-April of this year, I sold my production for 16 million zlotys to the state sector--130,000 kilograms of meat. This grants me the authority to take part in this discussion and to state what I think.

M. Bojarczyk: I concur that Mr Losiak's farm is the farm of the future. But, as one deriving benefit from a small farm, (my mother and mother-in-law reside in the country), I would like to emphasize, however, that it is the prevailing model for farms, and in the approaching years it will determine the level of food for society.

R. Manteuffel: In Poland, so long as the domestic production of food is required, the chief goal will be the intensification of the net end product of the individual facility. Should this necessity decline today--I do not visualize when this could happen--and the number of people on the farm were to be reduced in a basic manner, at that point it would be necessary to maximize the production of the individual worker.

The expansion of farm facilities, considering conditions and the lack of the means of production, lies in the interest of the farmers, who, by curtailing production and farm income per hectare, can in this manner increase the family farm income. However, so that the expansion of the farming facility would not react unfavorably on the social interests and not curtail the agricultural production of the country, which would eventually even be increased in size, there must be the possibility of full substitution of the diminishing amount of direct labor per hectare (labor force) by so-called indirect labor, or sources of production of industrial origin. This is a required condition, and until this takes place, only those enterprises can expand their facilities whose potential is higher than the need for this small facility; (they have a surplus of direct labor or sources of production which are not fully profitable).

In further perspective, when the market becomes saturated with the centers of production for farming, and the number of those gainfully employed in farming decreases responsive, we will acknowledge as proper the extensive polarization of farms. This signifies the rise of farming enterprises offering full employment to the farm family; and likewise the rise of small farms for dual occupation (farmer-worker), and allotted plots adjoining homes, where members of the family can benefit from marginal work. This will serve to help the family to provide articles of food for itself, as well as relaxation for those members of the family who desire this: an analogy with the allotted plots.

Under present-day circumstances, in conjunction with the need to increase farm production in the country, it is likewise necessary to promote the smaller farms of approximately 2-7 hectares in size which produce high yield per hectare, and which can increase their facilities by purchasing a couple--a few--hectares, if their potential for work and the means of production warrant it.

W. Michna: I suspect that my statement was interpreted as meaning that I question the rationale of a specialized or large enterprise. Absolutely not. I am convinced that the specialized farms benefited the best and generally considering, better than the medium and small, and furthermore, better than the socialized, from the fodder supplies, the manure, the means of preservation, etc., etc. If, on the other hand I referred sceptically to the possibilities of substantial changes in the agrarian structure, it is because I do not now see in the course of the next 10 years the possible application of such economic proceedings which would compel the small enterprises to sell land to the larger. This is a social matter. Let us not repeat what has occurred in Western Europe. The Western countries, on the basis of the economic screw, compelled small farmers to abandon the land. Shall we--espousing the unity of economic and political goals--can we permit ourselves to adopt such a "rational luxury" and apply restrictions regarding small enterprises?

M. Losiak: These are not restrictions, it is the introduction of the mechanism of the market.

W. Michna: Let us then use different terminology--such market conditions which compel the small farms to liquidate. It is not only an economic question, but also social and political. As a social agent, I must consider whether I could establish such market conditions feasible, for example, for a million or one-half million farming enterprises to sell land. Not from the aspect of model economics, because according to the criterion of the possibility of achieving high labor productivity, when is something worth striving for, but rather from the social aspect. Besides, it is always necessary to consider that small farms benefit well from the marginal labor force.

M. Losiak raised an interesting matter. He states: I have the capability to produce, why not supply me with fodder for dollars, so that I can sell meat for dollars through the department of foreign trade. For a given period, a solution of this type could become a reality. It is estimated--by a staff of foreign trade experts--that the export of meat can be increased by approximately 100,000 to 150,000 tons. It would be sensible to import fodder in order to increase the export of meat, subject to the condition, however, that the consumption of this

meat not take place in this country. In this instance the operation would lead to implication in a "debt trap." At this moment, the ratios of fodder to meat are very advantageous. It is confirmed even, that with the consignment of imported fodder to the specialized farms, whose use of it is especially effective, real benefits can be achieved. In the event of an improvement in the international situation, such an idea could become a reality.

J. Zuk: The chief concern with farming is the investment into that which provides good productive effects. In many instances during the past period, we have made irrational investments in developing--for example, the farm of Mr Losiak--this direction of production which was practical over the short run under Polish conditions. And while on the basis of comparative prices, he could function very well economically when he contracted 10 to 14 ares [an are is 1/100 of a hectare] for fodder in the United States or Canada. It represented a ballast, or a rope around the neck for the national enterprise over the longer term. We did not develop grain production in Poland only because we could buy. We established the policy in this manner: with the aid of a cheap labor force, we shall produce relatively cheap fodder [as published] in Poland--this at the beginning of the 70's--we shall export meat and maintain employment and profits simultaneously. Please let us focus on what happened--the price ratios changed violently; grain went up in the world markets, the price of our end product--especially beef--went down and we allowed ourselves to be led down a blind alley...

J. Olejnik: And my case?

J. Zuk: You made an investment, the enterprise invested, the buildings stand empty; we lose assets which produce no results.

M. Losiak: Immediately, immediately. Why did it not work out here? Because we consumed this meat. From a political point of view. In no country must one eat ham daily. In order to invest, I was forced to save.

R. Manteuffel: I agree with Mr Losiak that the fundamental error in the concepts of the years 1975-80 was not the import of fodder, but the consumption of meat produced from that fodder, instead of exporting that meat. On the one hand, this was a sign of megalomania (Poland must equal the West, and the economic level of the country is measured not by the size of the national income per person but by the quantity of meat consumed per person); on the other hand, fear society's dissatisfaction. The ancient Roman basis of government: bread and circuses.

J. Zuk: For this reason, I stated that the economy has been identified with philanthropy... Considering the matter generally, every country must insure the so-called food minimum. For example, the FRG and Sweden assure that 80-90 percent of the nation's biological needs be covered by domestic production. Regardless of whether it costs 10 to 20 percent more, or whether it would be easier to purchase it abroad.

M. Losiak: Why do we not do this?

M. Mikolajczyk: It was proposed at the outset to adhere firmly to basic realities. An attempt was made to consider fodder supplies, but it is obvious that

we became embroiled in structural and general matters. Why? Because this also belongs to those realities whose magnitude ought to be precisely defined. So, in spite of the assertion of Mr Losiak that he needs no guarantees, the Sejm decision can also be repealed. In view of this, he asserts that production and profit decide economic conditions. Justifiably so, however, these conditions, following his trend of thought, can also be changed, destroyed. Nothing is so certain as to last a lifetime, whether it be a capital or professional investment. However, it is certain that people wish to remain alive, and to accomplish this, they must first eat. But the thesis which rejects the exaggerated meaning of the so-called guarantee of the development of our agricultural production has me convinced. In speaking with farmers during the 70's--none truly like Mr Losiak--I never got the impression that the private farmer, a familiar figure to us, produces badly, and does not apply himself, because he is threatened with expulsion from his heritage. In the discussion, there were always too many complaints about the supply of production centers, while there were none regarding points of procurement beyond that of delay.

Thus, whence came the problem of guarantee and its career during the course of the past 2 years? Most generally, it is one of the results of the farm policy of the last decade. Economic expansion in its beginnings radically revealed all the weaknesses of the economic structure of agriculture, as well as the negativism of politics toward farming, which went unnoticed while the consumption of meat remained uncomplicated. (Marginally, demanding a respect for realities, we cannot capriciously speak of the unbridled consumption of meat in the 70's, because the increase in its price detonated the events of December, 1970).

Agriculture likewise yielded to expansion, principally in income and prices, because in the beginning the growth in production was high--as everywhere--in conjunction with the large imports. As soon as the sources of imported support were exhausted, agriculture found itself in difficult straits, being additionally hard driven by the family industry which abandoned it. Hard economic laws begin to approach the point of legislation; the time of examination arrived for agricultural productivity, as well as for the entire economy. The producers of highly marketably commodities, such as Mr Losiak, found themselves confronted with a fodder deficit which could have been effectively transformed into meat. The typical private producer, being less productive, felt even more threatened. Although it was easier for him to balance production, to survive, he began to perceive his weakness in the economic market and felt more strongly the uncertainty associated with the fate of the small farm in the framework of the general policy. And so was born--in my opinion--the problem of guarantee, the movement of self-defense, which as our discussion divulges, internally combined various currents in the village and beyond.

M. Losiak: I agree with you. These guarantees actually provide self-defense for those producers who produce little or badly, and for whom the mechanics of the market do not work, because for practical purposes it would be necessary to pay them in gold in order to make it profitable for them. We continue to repeat in a circle--crisis. And we do nothing. This reminds me of a refrain from a cabaret song: "The orchestra played while the Titanic sank." Why not create an opportunity for the young farmers?

Because we represent the ZMW, we would like to raise this matter. In addition to the obsolete agrarian structure, the problem of old age also appears in the village. An old person will never invest, because he has no reason to. I once had a discussion on television in which I demonstrated that the so-called hog crisis does not have to exist at all, (and I continue to uphold this). Repercussions to this program were dreadful. Great numbers of young farmers began to assemble and stated thus: listen, we wish to accomplish what you did. We wish to have farms; we wish to live like human beings; we wish to build new buildings. I could not provide them with a formula. Why? The youth has no chances in dealing with the bank, the municipality, the newspaper, the neighbor, because the truth is never told. And there is one truth--old people will not produce food in Poland...

M. Bojarczyk: But the young people do not want to stay on the farm. And it is characteristic that the larger the family is, the more difficult to find a successor. It is customary for the one remaining on the farm to pay off the family. In spite of the fact that the law knows no such practice. After paying off the family, the one remaining now has few funds left for new investments and begins to vegetate.

M. Losiak: But no one can understand one basic truth--to have something, one must invest; and who will make this possible, who has the financial resources? And here, please, is such a ledger, which I took along--figures. This is a frightening thing. This is the sentence of death for the chances of young farmers. All this material was purchased without any allotment. Go to the bank and tell them that it is necessary to give them money. They will say it is impossible because there is no security, and this money will aggravate the situation.

J. Zuk: Even if you have money, a situation will arise where you can paper the walls with it.

What you propose is a very good solution, but only for a short period. Likewise, it is not the solution for everyone.

M. Losiak: What you say in turn has been dragged around for more than 36 years. Therefore, let us not say that I operate for the near term. You know why I will never have money. The peasant will have it, but I will not. Because I continuously invest.

J. Zuk: You view these matters from the point of view of personal interests. If, on the other hand, if we look through a prism, at the entire economy, we can say that the actual state is the result of a wrong approach to agriculture for the last 20 or more years. We accepted, as dogma, that socialized farming in the sense of nationalization, is the future. It has been proven that in our circumstances the effectiveness of this sector is very low. On the way, we committed a series of various errors: abortive investments, giantism and other similar errors. If we fail today to construct a program of changes in the agricultural structure, then in a few years our agriculture will be on the gray end, and not only in Europe.

In the 1970's a small group of private farmers and rather large group of cooperative enterprises received support...

J. Olejnik: And what was the form of this support?

J. Zuk: I inherited a farm from my father which I transferred to my brother. We could invest the state's money and subsequently take amortization.

J. Olejnik: But others could not.

J. Zuk: Everyone could.

J. Olejnik: Hence, do not say that there were only a few.

J. Zuk: Theoretically everyone could, but it was not sufficient for all. He who began to apply combinations received credit. It came to this, that more than half of the 37,000 registered specialized farms have nothing in common with the agricultural economy. These are primarily farms of the expensive and conversion type, producing on the basis of imported fodder. This is impossible, but subject to one condition, that money should be available to all, including those whose farm production is related to the land. For the land is the basis for animal production, but not the buildings. In the PGR we built many calf and hog farms. But this had nothing in common with farming. And they were set up to derive benefit from a market condition which created the chances of making some money for an unusual group of people.

To me, an enterprise logically organized, is one which benefits fully from the land and produces basic fodder. The United States is no example for Europe, because there 2.25 of a hectare is designated per person. In our country we make use of 0.4-0.45 per inhabitant, and so it is clear that we concentrate on the intensification of production. Based, however, not on the building of inventory but on a hectare of land. We can expand our animal production only on the basis of domestic fodder.

Please look at the prices for animal products on the world market. Up to that time when the socialistic countries did not invest big money into animal production, the price ratios of fodder to meat were beneficial to meat. Today the ratios have changed.

J. Olejnik: The law of supply and demand.

J. Zuk: This can be explained by supply and demand. However, primarily the change in the ratio of prices was a political drought. Certainly the U.S. Secretary of Agriculture did not state idly that food will become the defense of the 21st century.

J. Olejnik: A very intelligent man.

J. Zuk: I also agree with this. And, more or less, from that point--though not only for that reason--we lost. The dollar sold in certain of our products cost us a frightful lot. Enterprises like that of Mr Losiak, were, are, and

will be. Only this is not the direction of progress. You can contract for fodder with another farmer actually specializing in its production. And you can visualize such a prototype. But it is capable of expansion, if the nonfarming population agrees to such an agrarian reconstruction and supplies the money for it. Why belabor the point, this is a leap by one generation. This must, however, cost. Gentlemen, you are already...

M. Losiak: ...the coordinators of the 21st century.

J. Zuk: No, just people who try to leap over. Only you do this without basis, without any backing.

J. Olejnik: I have my own fodder. This does concern me.

J. Zuk: Gentlemen, you exploited the opportunity created for you by an erroneous system arising from reconstruction of the agrarian structure. For, if you built a pig pen for 1,200 units during the closed cycle, and in addition expanded your own fodder production, you would not be waiting for fodder or money from the bank.

J. Olejnik: We are so far ahead that we have empty shelves.

J. Zuk: We have empty shelves because 10 years ago we crawled into a tunnel and conducted ourselves there as if intoxicated. Truly, even in 1973 it was obvious that we had adopted an improper course in the development of farming. We liquidated, among other things, about 6-8 million hogs on the small farms; and, as long as it was possible to import fodder, it was also possible to push this erroneous course of farm development.

Now, again, we are confronted with the necessity of preparing the reconstruction of the agrarian structure as our next step.

J. Olejnik: You stated that we lost 6-8 million units. But those 8 million hogs feeding unreasonably were consuming our fodder supply. Do not expect the peasant to chase one hog behind the barn, and attempt to fill the store shelves with rearing of this nature.

M. Losiak: There is only one point of view, and a tritely direct solution. If in the West there is an abundance of food being produced by highly marketable enterprises, then we likewise have no other solution.

J. Zuk: I agree. Only please remember that those highly marketable commodity enterprises have been forming for the past 100 years.

M. Losiak: And we have no time. We lose on many fronts. We impoverish the nation biologically. Do you comprehend?

J. Zuk: Only who, at this moment, will provide us with the means...

M. Losiak: Simply stated, a return to work is required. Immediately following this discussion, I shall return home and get to work producing food.

J. Zuk: However, will you find many who might have facilities for production such as yours? Are they so inclined?

M. Losiak: Of course, and many are young people. If only they had the ability to secure credit. Nothing more is necessary.

J. Zuk: Not money, only...

J. Olejnik, M. Losiak: Money, really. Nothing more.

J. Zuk: I know, for example, at this moment that you can go to the cement factory and pay 40 percent more and buy cement. But in this manner nothing will change in the economy.

M. Losiak: Obviously this is your logic. The cement factories stand because they have warehouses filled with cement, but there are no buyers. The circle has closed. We stand immobile.

J. Zuk: A thousand or two can produce as you do. The remainder cannot manage.

M. Losiak: A hundred thousand can manage, and hence why any more, when the 100,000 will feed the whole country.

J. Zuk: But your farm stands empty. Even several years ago I knew that it would be so.

J. Olejnik: And did you know also that mine would be empty?

J. Zuk: No, not that. But you committed one error. You built too many facilities in relation to your personal capabilities.

J. Olejnik: I had everything, my own fodder and my own funds.

J. Zuk: Then in this instance it is the error of the person who serviced you, in that he limited production capabilities.

R. Manteuffel: The multigeneration family institution can facilitate the start and later the management for young farmers, subject to the condition that the elderly and young maintain separate dwellings (or homes), and that the division of work be firmly fixed. Either the elderly conduct some phase of the farming or substitute for the young in everything, when they must or desire to leave (for a day or a month). This is possible only on larger farms, where the needs as well as the capabilities equally exist.

For the young with initiative and the desire for productive work, an attractive solution could be a farm settlement (on an abandoned facility, or by investing from basics). In this instance, there is likewise the need for financial aid in the form of convenient credit, and aid in the securing of building materials and farm utensils.

The multigeneration family institution enjoys popularity in the West; it solves the basic problem: the Friday and holiday farm ties, especially those connected with the production of animals.

A. Swies: I observe, perhaps contrary to intentions, that our discussion is revolving rather around the political sphere, but to a lesser degree to economic problems; and already completely omits production issues. Perhaps, then, I shall raise more earthy problems. For example, we estimated that an average slaughter hog yields about 80 kg in meat-fat mass. Now let us take the retail price--the value of the slaughter-hog covers 50 percent of this meat mass. If we sell ham, the chops cover the value of this slaughter hog. This is located somewhere, someone intercepts the producer's profit. Another example: the price of vegetables. My place of business is located not fully 20 km from Warsaw. For 1 kg of vegetables delivered to the garden cooperative, the difference in price which I receive and that obtained in Warsaw amounts to 6-8 and sometimes more zlotys which means about 30 percent and more. It seems to me that we have too many middlemen.

The next matter. In the long run, industrial products are preferred; they are priced higher than farm products, and as long as there is not true ratio here, it will be difficult to speak of improvement. Someone made an estimate which I did not confirm that 1 kg of a ploughshare costs more than 1 kg of a Fiat, and thus statements and words provide little.

M. Bojarczyk: I would like to warn against the creation of the myth that all will be solved by an increase in the supply of the means of production alone. Recently it was stated that the consumption of fertilizer will increase. However, an increase of fertilizer is not now as effective as before. We have arrived at a certain barrier. The natural land yield in our country approximates 12-13 quintals per hectare. It is actually an expense to increase this yield. Every additional quintal must be paid for. If we wish to achieve a yield approximating 30-40 quintals per hectare, we must use fungicides in addition to greater quantities of fertilizer. But we do not even have herbicides on our market. Conditions are such in Poland that the soil is poor in microelements. In the West these problems do not exist because their soil is different. They may have the same experience in 10 or more years. And so? Are we to wait until they invent this and then import it? The microelement problem is solved. Several patents are in existence, but production is at a standstill. On the average, Polish soil can yield 3-4 quintals more per hectare when enriched with microelements.

I am astonished as to why we do not produce any so-called fancy farm goods. For example, we import linen fiber, but the cultivation of this plant is constantly curtailed here. For example, we do not cultivate sufficient hops or tobacco in the Lublin area. And, after all, the ratio of prices is such that the return on the tobacco yield per hectare equals that of 10 hectares of wheat. All these are labor-consuming cultivations. But actually we should develop these in our present economic situation. This applies especially to small farms, because on the large farms, which are mechanized to a high degree, the cultivation of grain in more preferable.

R. Manteuffel: In order to maintain the consumption of meat on a level which can be guaranteed by the national production of fodder, (on the basis of present-day capabilities it would approximate 50 kg per inhabitant); it is necessary at any price to maintain the availability of farmers and likewise the dual-occupation and rural nonagricultural population to develop animal production. This availability is an immense achievement which would have been practically unthinkable prior to 1980. After all, the defense against a threat of departure from animal production by a majority of the farmers was to be the specialized farms. Primarily a high level of milk production should be maintained. Proportionately, the high cost of animal foodstuff should motivate the farmers to fully capitalize on all fodder regardless of whether it is, among others, of stable green commodity, table scraps or a byproduct of the farmer-consumer industry. The high prices for milk can indirectly motivate farmers to increase the production of sugar beets, as a source, among other things, of fodder (leaves and squeezings).

There exists also the possibility, in order not to suppress this tendency to increase animal production, to simultaneously have an assurance of grain for consumption and allow grain use for food (without limitation), and the export of surplus meat in exchange for grain.

Press: The production goals which you gentlemen present concerning the various spheres of farming must be effectively supported by a viable economic system and technological equipment and service. What are the possibilities for the better performance of this system?

W. Michna: The primary concern is for greater industrial production for the benefit of agriculture. Industry, outside of limited exceptions, does not appear to provide service to agriculture. The rules of the game constituting a comprehension of the economic reform, lack the mechanics to restrain industry from its reluctance to serve agriculture. The situation is such that the minister of agriculture and perhaps 500 other persons, induce industry to convert to serving agriculture; and a million employed in industry ask: Will it be worth it. In the meantime, there is no system to assure the profitability of conversion.

The second matter is the question of the rise in the retail price of food. An increase in prices must follow. It is already necessary to notify the people that food must become more expensive. Then the occupants of even small farms, and even of small allotted farm parcels will be interested in exploiting the land. Currently--even after the increase in prices--about 220 billion zlotys have been added to the food economy. It is always more economical to buy milk than it is to produce it.

Regarding questions of preferential investments, there are certain investments in farming which must be supported either by a policy of taxation or by a system of subsidized budgeting. Such investments include, for example, improvements. We have about 18.9 million hectares in farm facilities, and of this amount 5-6 million hectares require improvements..

Taxation, in order to qualify as a system, must be established on the basis of 10 percent of income. The present tax appears to be about 1 percent.

Finally, and this is a very important issue--the systems for insuring the profitability of farm production. This is the most complex question. However, it can be stated that the present state of profitability is correct and should be retained, being corrected only by creeping prices. But the law of supply and demand can also be applied. In concurrence with this, allow prices to rise until they reach market parity. Unfortunately, in our economic situation--with its large inflationary fissure--the law of supply and demand cannot regulate prices. A third solution could be income parity--the average income in socialized farming amounts to about 10,500 zlotys and, hence, those engaged in private farming should be assured more or less the same earnings.

Likewise attention could be drawn to the ratio of prices between the sources of production for agriculture and the agricultural products on the European market or a given country; and then apply this to our situation. For example, a tractor in France costs about 40 tons of wheat. Unfortunately, we do not have a complete working philosophy of the profitability of agricultural production. The predominant conviction of society is that even now the farmer has a large income.

A certain freedom in the market is indispensable to the farmer. This means that the farmer, as was stated by Mr Olejnik, must not be compelled to render a complete account to the bank. The farmer who supplies products cannot have so-called conditional credit. I am thinking likewise about the freedom of farmers as partners in the turnover of farm products. Why, for instance, should there be a national monopoly in the sale of potatoes? Why not grant permission to the farmers to supply the cities with potatoes?

R. Manteuffel: It is necessary to observe rigorously the principles of agricultural reform, and not desire to avoid temporary difficulties or problems, and resign from the application of these principles. Aid, if such appears necessary, can be applied to farming independently of the sector. It would be unfair, and in the long run prove to be unprofitable for the privileged sector, if the aid is applied only to one sector. The authenticity of this observation can be witnessed by the results of "aid" imparted to socialized sectors after 1974: production fell drastically, with a final net of no production.

A. Swies: There is sometimes discussion on unwanted investments; for example, there are many calves, farm broilers and others. The private sector was not bound by directives, however, the national sector was. Today, in spite of these investments, production is not profitable and money must be sought in other areas of production in order to offset the cost of the unwanted investment. And because of this, it is in such land-related matters that the possibilities for a solution to the problem are imbedded, not in big words. Why not try to find a solution to the issue of investments in the form of cooperatives, resale, renting to people who wish to exploit and produce. The difficulty stems from the fact that there is no security in the land, but if at the same time the turnover in land were facilitated without any additional outlay of investments, production could come from parcels of property already in being.

M. Bojarczyk: An important issue which cannot be overlooked is the modernization of at least the fundamental work in agriculture. The farm associations do not pass the examination, because they are consumed by the inordinately reconstructed administration and disorganization. Some other forms of agricultural service must arise; for example, cooperatives for private farmers, the utilizers of machines, or related points.

M. Losiak: In good agriculture it is not only the market mechanics that work. There is also a factor at work to which we have thus far attached little attention, the financial factor, not in the form of prices, but in the form of active financial policy. There should be at least two or three banks serving agriculture. The BGZ is only a name, nothing more. If I wish to obtain credit, the director can always refuse me and bear no responsibility because the administration stands behind him. And the administration consists of mostly retired teachers and farmers socially communicating, who, however, are not in a position to understand either the new technology or the financial needs of the times. There should be a bank in which experts could review the soundness of issuing credit even at a higher rate of interest. At present it is humorously low. But after credit has been issued, I am responsible to pay it by my management. There should be no control over the appropriateness of its disbursement.

If we are to institute the development of highly marketable commodities in private agriculture, then it must be intimately bound to social agriculture. I mean that if I can discharge my obligations by providing a flock of hogs, then likewise, the other party must discharge the obligations it has assumed. After all, while I am engaged in the breeding of 5,000 hogs, I will not chase around the market place and arrange for their sale.

Finally, the issue of the practicality of the works of our scientists. Truly the hair on one's head bristles from all these theories and pseudoscientific concepts. Let us take, for instance, the issue of hog genetics. At one time, there were germination colonies on the small farms where very good hogs were genetically reproduced. This has all gone to seed.

A. Swies: That is correct. During the past few or more years the task of breeding was confined to cattle and other type of animals. At one time, we had world famous bacon and hogs for general consumption and others; our cattle was exported.

Our scientists do not occupy themselves with what is really necessary, for example, research concerning cultivation of the lupine plant. But, actually, our forefathers already knew how to cultivate lupine. Meanwhile, lupine is planted and harvested manually in experimental plots, and it has been determined that such and such crops can be raised in third-rate soil.

From a scientific standpoint, there is no effective support of agriculture. Science must finally go into the field, to the producer. No scientific title, whether that of master or doctor, should be granted for purely statistical works, but only for specific effects demonstrated in production.

M. Losiak: Friend Bojarczyk perhaps has a reason for his desire to create folklore--that the village is happy, the village is tranquil. Gentlemen, let us forget folklore when we discuss production. It is necessary to approach the entire issue technocratically--there must be food. If so, then how much, for how much and in what manner?

A. Swies: I would still like to raise the issue of food subsidies. After all, these subsidies are received by the consumer industry and not the farm. I stated previously--a kilogram of vegetables costs 20 zlotys but in Warsaw it costs 32. The same pertains to milk. Agriculture receives no increase here.

J. Olejnik: This explains where the money goes...

A. Swies: And society, the working class is told that we add so many billions of zlotys to agriculture. It creates a bad climate surrounding agriculture; that it consumes resources and applies them ineffectively. Agriculture accepts subsidies for services only in the private sector. But, for example, the PGR does not take any subsidies.

Dr Michna stated that the cost of food must rise. I believe that because food prices have now risen, and violently at that, there should be no new increase for a long time. Wholesale prices are much lower than retail. And, therefore, the elimination of the very costly middleman between agriculture and the consumer, or a decrease in the cost of operation of these middlemen, would make possible an increase in whole sale prices without any change in the retail price of food.

Press: In our discussion we concentrated on issues related to private farms, such as family farms, highly marketable commodity farms, those run by young farmers and those similar--and in conjunction with this, on the changes of the agricultural structure within that sector. We did not discuss the problems of agriculture in its total structure. Only the issue of the intersector connections was noted. There was no broader discussion on the internal problems of the socialized sector which plays, as is known, a significant role in feeding the country.

The answers clearly outlined the differences in the views on a subject in which highly marketable commodity farms, family farms, and perhaps all such types, are or should play the dominant role. Our model of farming provides--in spite of immediate difficulties, today mainly with fodder supply--the possibilities of development for various types of farms.

The discussion panel sees chances for improvement in the agricultural situation by granting the possibilities of advancement and development to young farmers and by improving the entire sphere of farm service, including deliveries from industry. On this question, there were no basic differences of opinion, although there was no lack of criticism.

The issue of cooperation among private farms was also undertaken. Various forms of combining the activities of several farms which were emphasized must lead to organizational changes in the division of work.

The greatest controversies arose around the problem as to what is more important: yield based on one laborer or on farming, or yield per hectare. The improvement in the degree of providing food domestically is a fundamental issue. Both of these tendencies should be settled. The entire body guiding agriculture should, hence, provide that the growth in agricultural productivity be, above all, the result of augmenting the productivity of the land.

Thank you for your participation in the discussion

[Discussion edited by Marcin Makowiecki]

9951
CSO: 2600/763

NEED FOR FULL USE OF ALL AGRICULTURAL LAND STRESSED

Warsaw SLOWO POWSZECHNE in Polish 4-5-6 Jun 82 p 9

[Interview by Miroslaw Prawdzic with Boguslaw Zukowski, a main specialist in the Department of Land Management and Agricultural Equipment of the Ministry of Agriculture and Food Economy: "Every Hectare Must Produce"]

[Text] [Question] Recent inspections have revealed a great deal of under-developed land. What should be done to improve this situation and to have every hectare produce?

[Answer] In Poland we have to deal with agricultural land of very different suitability for production. Here we must clearly differentiate land which is not developed, but should be so immediately, and land which requires pertinent measures, usually land reclamation, before it can be developed. At the moment the major problem is the first one. In my opinion initiation of production depends mainly on guaranteeing profitability of production and implementation of socially accepted methods of procedure when glaring negligence is found in meeting the legal obligation of the agricultural utilization of farm land by the owners.

A great deal has already been done in the matter of guaranteeing production profitability, but, as we all know, this is still not enough. At the present time work is in progress on a new system of contracting for crops. The Ministry of Agriculture and Food Economy has prepared a draft directive concerning prices and conditions of sale of State land that is adapted to the current socioeconomic situation. This creates further possibilities for increasing sales of land from the State Land Fund to farmers.

Another matter has been solved recently, on 26 March of this year. The Sejm passed a law for the protection of agricultural and forest land. It provides for very heavy fines for the deliberate exclusion of land from production and the possibility of conducting necessary cultivation measures at the cost of the owner. There are methods conforming both to the various new regulations in the law reinforcing land ownership on private farms and to the conditions created by the economic reform introduced.

Within the framework of checking on preparations for spring agricultural work that was carried out on 23-27 March of this year in 1,940 gminas [parishes],

more than 90 percent of their entire number, a threat of the possibility of fallowness or insufficient agricultural utilization on an area of approximately 233,000 hectares of arable land was found, i.e., approximately 1.6 percent of their entire area. Let me stress that only a threat was found, and not the fact of fallowness or insufficient utilization. By 15 May of this year the gmina leaders had to initiate activity aimed at guaranteeing proper utilization of at least a decided majority of this land, if not all of it, since some of it requires adequate specialized measures, and since it will be difficult to find people willing to manage some of it, the least attractive land.

[Question] It is well-known that socialized farms have appropriated land which they were not able to properly develop later. Now these lands are being returned. Are the quotas assigned for their development also being returned?

[Answer] Subsidies are always a form of State aid, in this case increasing the possibility of rapidly putting the acquired land into production. State aid has gone mainly to purchase tractors and other machinery and equipment for livestock-building and housing construction and for the costs of direct cultivation measures to prepare land for the needs of plant production. It has been distributed in accord with the concrete needs of the receiving farm, often for only some of the purposes mentioned.

Therefore, after years of management, we cannot generally speak today of a return of subsidies allotted, especially if they were used to improve soil, to expand fixed assets, and so forth. The problem must be individualized and reduced to obvious measurable cases.

On the other hand the possible question of accounting for the deliberate and improper use of subsidies, not in accord with their allocation, is completely obvious.

[Question] In addition to the regions in which a land deficit is found (for example, Kujawy), there are some which have a surplus. For instance, is there a program to develop Bieszczadow, where there is an exceptional amount of land?

[Answer] If I understand correctly, this is a matter of the ratio between the amount of agricultural land in individual regions of the country and the labor force existing in agriculture, with particular reference to this question in the Bieszczadow area. With this understanding the surplus of land usually occurs in the northeastern regions and applies in general to the poorest soil, where production results do not balance the outlays of work and money invested. Investment in such land, in the so-called agricultural infrastructure, is very costly and the anticipated period for the return on outlays is long and often only a return is possible. This refers to both socialized and private farms.

On the other hand the Bieszczadów area has comparatively good soil, and we cannot speak of a "surplus" of this land. All of the agricultural land offered for sale by the State is bought up almost immediately by local farmers. In this region the State farms also generally possess too little land in proportion to their existing facilities and, under the reform conditions, they already are and will continue to be forced to undertake recultivation work, brush removal and so forth to expand the area of cultivated land for their own needs.

Therefore, if we speak of a "surplus" of land in Bieszczadów, it is mostly of the land which would require very expensive recultivation measures to be returned to agriculture. Since your question had the word "program," I would like to say that there have been quite a few of them in connection with Bieszczadów. We know what they have produced. Now we need regular, sensible and economically justified management of the land which is owned.

[Question] A subject which is arousing a great deal of controversy in the country is land integration. After such operations the peasants do not always get the land which has been made available for integration. Often they are the worst hectares. How do you view this problem?

[Answer] In 1968-1981 integration work embraced an area of about 3.8 million hectares included in more than 600,000 private farms. At this time approximately 18,000 complaints have affected decisions associated with integration progress, that corresponds to a little less than 3 percent of the total number of integration participants. Of these only some of the complaints have been considered and acknowledged as proper, but never more than one quarter of them in individual years. As we can thus perceive, omitting obvious errors which occur in all such mass operations, the scale of the phenomenon is not great. Returning to the matter of the "worst hectares," let me explain that the integration of land is based on the combination of a greater number of small or excessively elongated, irregular or even scattered plots into a smaller number of larger plots.

This system uses a relative evaluation of land based, among other things, on the fact that the better land located closer to farms is judged to be "more expensive," and the worse and more distant as "cheap." Every participant in integration should attain in the new land situation a value such as he had in the so-called old situation within a 3 percent limit, and in case it is exceeded, surcharges and monetary clearing of accounts are used.

[Question] One more question, proper land management includes land reclamation. What is being done in this respect?

[Answer] Land reclamation is simply improving it and adapting it to management. You are obviously thinking of water reclamation. This is based mainly on regulating the water-air ratio in the soil. Current production possibilities of water reclamation enterprises are modest, not only with respect to what is needed, but also in comparison to the condition several years ago. At present these capabilities should simply be expanded rapidly and, at the same time, be applied to constantly improve the quality of execution.

[Question] A great deal has been said on the subject of the need for making a constitutional regulation on the right of peasants to own property. Here there is a fear that, after the regulation has been approved, many farms may prove to be unproductive. What possibilities will the State then have of repurchasing such land?

[Answer] On the strength of changes recently made in the Civil Code, the State has confirmed guarantees of inviolable ownership of private farms. However, this does not mean that our legal system has now become more helpless with respect to cases of especially glaring neglect of the obligation of the proper utilization of agricultural land. This law levies on every owner of agricultural land the obligation of using it properly. When fallowness is found to be the fault of the owner, he will be saddled by heavy fines which, if he is insolvent, may be the basis for an appearance in court about a lien on property.

On the other hand, if the fallowness is confirmed on land where the owners have not lived for at least 2 years, it may be taken by the State Treasury without compensation.

However, the State is not so interested in taking land from farmers as in creating economic and organizational conditions encouraging intensive soil cultivation. The sanctions have only the purpose of providing for possible intervention in extreme situations, where there is no longer any chance of expecting improvement in the existing unacceptable state.

6806
CSO: 2600/785

EXPENDITURES OF FARM FAMILIES PROBED

Warsaw TRYBUNA LUDU in Polish 4 Jun 82 p 3

[Interview with Dr. Bozena Gulbicka of the Agricultural Accounting Center of the Institute of Agricultural Economics in Warsaw by Wanda Zawaga; date and place not given]

[Text] [Question] Let us discuss initially rural accounting and the results of your research into this area.

[Answer] Rural accounting comprises every bit of information about the economics of the rural economy and its organization. Basically, these include all aspects of the rural economy in every region of Poland and the structure of production on small and large farms.

Data used in our research are especially useful for long-term analysis, as they give us a picture of tendencies for changes appearing in the economy of the private farms. The data show a clear picture not only of the production and socio-economic situations but also of the various types of farms. During the analysis, however, it is necessary to remember that the results of our research cannot justify transferred to the average farm in the country, when the fact is that the introduction of an accounting book by the farmer has contributed to an improvement both in farm organization and economic results.

[Question] What period do your most recent data cover?

[Answer] The year 1980. Now we are studying the accounting books from 1981.

[Question] For what purpose did the farmers appropriate their income?

[Answer] First for stipulation: income from the farm comes from the farm itself and also from income generated by members of the family in areas other than agriculture, as well as from social services like pensions or student scholarships. After paying all of the necessary services to the state and third parties, as well as production costs, the net income remains, which is the subject of our research. The farmer must earmark a portion of the net income for consumption and a portion for capital accumulation.

[Question] How much then was earmarked for consumption and how much was invested in the farm?

[Answer] In 1980, approximately 75 percent of the income was earmarked for consumption and 25 percent for capital accumulation. But capital accumulation is not just the increase of specific means of production, but it also includes expenditures for non-production means (e.g., home construction) or increased cash flow. The larger the farm, the higher the percentage earmarked for capital accumulation. For larger farms, it stands at 35 percent or even higher. However, analyzing long-term data and comparing the structure to that of previous years, it is easy to see that this was not a profitable year for agriculture, and the percentage share of means earmarked for capital accumulation was reduced. This was a reflection of the situation in the country: it has been difficult to obtain machinery, agricultural implements and construction materials, and at the same time agricultural results have not been the best. Thus, farm income either equaled that of previous years or was lower.

[Question] One can also conclude from these data that cash flow began to rise in the rural areas.

[Answer] Gradually from 1980, there have been several price increases in the procurement of agricultural products, the goal of which was to increase production. At the same time, farmers have begun to sell more and more of their products on the free market for higher prices. Governmental prices for the means of production, even those that were accessible, did not increase. In the accounting books from 1981, which we are analyzing now, we have noticed a significant purchase of consumer goods (clothes, shoes and also luxury goods). However, a good deal of cash remained. It could not be earmarked for the means of production, as there was not enough; thus, cash remained.

[Question] Not too long ago this year, a decision was made to raise prices for means of production in agriculture. On the basis of your data, can you predict its results?

[Answer] The price increase for the means of production and services came about from the principles of the price reform. I think, however, that the cost of procurement should appear sooner with the previous price increases. In order to guarantee the farmer profitability in production, both types of increases should appear not only together but also gradually.

We attempted to calculate profitability in production in several of our researched farms. We took into consideration the actual procurement prices and the prices for the means of production. I recall that it was difficult to generalize those data for all the farms in the country. According to our calculations, the relationship of prices for sold goods to those for acquired goods among the researched farms worsened considerably. If we recall that both in 1981 and 1982, farms sold and bought the same amount of goods, it appears that, for example, at a 7 hectare farm in Tarnobrzeg voivodeship, income from sales (as a result of the price increase for procurement) increased by 96 percent, while expenditures (as a result of price increases) rose by 158 percent. On this particular farm, profitability for production fell considerably.

[Question] Does this change the structure of expenditures?

[Answer] This farm purchased a lot of feed. Because of current prices and a shortage of feed, it will have to change its production technology. This farmer now has to produce his own feed, but certainly this will have repercussions on the amount of sold products.

[Question] What is the current relationship between the prices for procurement of agricultural products and the prices for the means of production and services?

[Answer] The prices for procurement have risen on the average of 20 to 35 percent, while the means of production have increased two to three times. Here is a provision: the means of production include machinery and implements that the farmer uses once for a certain time period, and services, feed and fertilizer needed every year. When analyzing a farm budget, it is also necessary to take into consideration that since February 1982 the cost of living has risen, as is the case in the city.

[Question] According to your forecasts, then, how and by how much will the situation for farms change this year?

[Answer] One can foresee that the financial situation for the majority of farms as compared to last year will get worse. However, this will not be the case with money, as there is an apparent abundance here, but what can be purchased with the money? Many farms continue to earmark free cash, despite the increasing cost of living, to the purchase of machinery and agricultural implements. Thus, how a farmer spends his money depends primarily on industry.

9807
CSO: 2600/783

DEMOGRAPHIC INFLUENCE ON SOCIOECONOMIC PROCESSES ANALYZED

Warsaw RADA NARODOWA GOSPODARKA ADMINISTRACJA in Polish No 10, 14 Jun 82
pp 25, 26

[Article by Jerzy Keczen: "Demographic Determinants of the Socioeconomic Processes, 1981-1985"]

[Text] The occurrence of demographic fluctuations created by the demographic peaks and valleys (periods of highest and lowest birth rates) reflects a periodic difference in the age structure of the population; producing essential socioeconomic consequences. In each age group of the population there are to be found specific sociovital needs, and a varied participation in the creation of the national income. Consequently, age changes in the population's framework introduce definite transformations in the framework of social requirements and influence the economic prospects of the nation in their attainment.

The demographic situation from 1981-1985 will differ significantly from the circumstances surrounding the 5-year period under consideration. This will become evident from the basic changes in the proportionate increase in population in three principal age groups: the preproductive, the productive and the postproductive in both periods.

The implicit increase in Poland's population from 1981-1985 will approximate that of the past 5-year period, amounting to about 1.6 million people. This indicates that the number of people in Poland will grow from 35.7 million people in 1980 to 37.3 million people in 1985. The growth rate of the population from 1981-1985 will carry an average annual increase of about 0.9 percent and it will be somewhat lower than during that of the 1976-1980 years. This is determined by the anticipation of a lower birth rate in the present 5-year span, and a considerable increase in the number of deaths that took place in the past 5 years.

However, the fundamental differences deal with the structure of the population's growth according to age in both 5-year periods. They are so great that one can speak of the different strategies of the socioeconomic development of the country resulting from demographic determinants.

In the years 1976-1980, over 80 percent of the general increase in the population of the country was determined by people in the productive age category. This required adequate orientation in the socioeconomic policies of the labor market; guaranteeing those arriving at the age of productivity and their successors in the demographic explosion adequate facilities for employment, education and occupational preparation.

In the years 1981-1985 the situation, in this respect, will undergo a basic change.

The growth in population of those in the productive age bracket will be twice as small, and its share in the general increase of the country's population will not exceed 42 percent.

The most dramatic growth rate will occur in the number of people in the preproductive age bracket, because it is four times as large as that of the past 5 years. Their share in the general population growth of the country will increase from 10 percent during the years 1976-1980 to over 42 percent in the 1981-1985 period. Such a sizeable growth in population in the preproductive age produces specific demographic determinants for the present 5-year period. Consequently, it signals what new problems, and their scope, that are related to the needs of the population in the preproductive bracket, are to be solved by the socioeconomic policies of the years 1981-1985.

At the same time, during the course of the current 5-year period, there will take place a 1.5 times greater increase in the population growth in the postproductive age bracket than took place in the past 5-year period. In the general growth of the nation's population, the share of the population in the postproductive age category will increase from 10 percent during the years 1976-1980, to 16 percent during the 1981-1985 period.

The consequence of changes in the framework of the population's growth, on the basis of age, in the current 5-year period, will be an increase in the growth of the burden on the population in the productive age bracket caused by the remaining population. The number of persons in the preproductive and postproductive age brackets will rise from 68 persons in 1980 to more than 70 persons in 1985 for every 100 persons in the productive age category. This signifies the necessity of expanding the social services to satisfy the needs of both nonproductive population groups, as well as improving administrative processes so that the population in the productive age bracket, being actively engaged in the labor process, would be able to produce an adequate supply of goods necessary to satisfy the needs of all population groups. This requires adequate growth in labor productivity and an increase in the size of the national income through the contribution of everyone employed in the national economy in the sphere of material production.

The proportionate changes as outlined generally in the framework of the population's growth, according to age, in the current 5-year period, do not encompass all the complexities of the demographic determinants of the years 1981-1985. An analysis of the phenomena occurring in basic socioeconomic groups of the population in our country, reflects them in greater detail.

INFANT CHILDREN (0-2 years of age)

The size of this child population will be significantly smaller in the passing years of the present 5-year period. A determinant is the anticipated decrease in the number of births in the approaching years. If these expectations are realized, the number of infant children after peaking out at 2,016,000 in 1981, will gradually recede and total 1,946,000 in 1985. During the entire 5-year period, the number of children in the infant bracket will be decreased by 41,000 persons. This will not substantially minimize the future need of basic material facilities for infants. The declining trend in the number of infant children will be a relatively constant tendency in coming years.

CHILDREN OF PRESCHOOL AGE (3-6 years of age)

The number of children of preschool age will grow in the passing years of the current 5-year period from 2,505,000 in 1980 to 2,668,000 in 1985. During the entire 5-year period this group of children will reach 163,000 individuals which is a 7 percent increase. At the same time the increase in the number of 6 year olds by 11 percent is especially dynamic, and this group should be provided with complete preschool care. The number of 6-year olds will reach 670,000 in 1985. As a result of the above determinants, the 1981-1985 period will give rise to a further growth in the need for preschool care, and hence, it is necessary to develop additional preschool facilities over the possible longer term.

CHILDREN OF ELEMENTARY SCHOOL AGE (7-14 years of age)

The population of children pursuing a compulsory course of studies in the elementary schools will, during the current 5-year period, represent the greatest growth rate of all socioeconomic groups. This group will grow to 4,817,000 children in 1985 as compared with 4,210,000 in 1980. This indicates that the number of children of elementary school age increased by 607,000 during the 1981-1985 period, or 14 percent. This gives a picture of the scope of the problems which education must solve in the approaching years. These problems are singularly the most important to evolve from the demographic determinants in the current 5-year period. They are related to such matters as: the creation of facilities to receive an increased number of students into the elementary school; an assurance of adequate paper supply for increased outlays of school textbooks; the preparation of an adequate number of school aids and the like; but above all, the assurance of a qualified educational staff.

YOUTH FROM AGES 15-17

This is the young population pursuing studies in elementary and various types of secondary schools, and the youth learning a trade. During the current 5-year period there will be a down trend in the number of young people in this group from 1,590,000 persons in 1980, to 1,528,000 in 1985, representing a decrease of 62,000 persons for the entire 5-year term. As a consequence, the flow of postelementary school graduates into the labor market will be reduced, especially qualified workers.

YOUTH IN THE 18-19 YEAR BRACKET

This is the age at which young people complete postelementary school, obtain the secondary school certificate and begin to study at higher schools of learning. The size of this group of young people will be characterized by a down trend during the entire 5-year period, falling from 1,131,000 individuals in 1980 to 993,000 in 1985, a decrease of 138,000 persons.

At the same time, the number of youths attaining age 19, representing the source of recruitment for schools of higher learning, will drop from 574,000 persons in 1980 to 501,000 persons in 1985, a decrease of 73,000 persons. From the point of view of demographic implementation, the reduction in the number of students accepted for the first years of study by the higher institutions of learning will be radical in the current 5-year period.

POPULATION IN THE 20-29 YEAR BRACKET

This is the population group of marrying age, the creators of new homesteads. It bears an influence on the formation of the current needs for housing the people, as well as the demand for household goods, home furnishings and the like. The number of people in this group will be diminished by 701,000 persons in the current 5-year period, declining from 6,672,000 persons in 1980 to 5,971,000 persons in 1985. Considering the huge housing backlog from past years, the demographic tendencies outlined will not serve to ease the housing shortage in the present 5-year period.

POPULATION IN THE PRODUCTIVE YEARS (18-59 years of age, females; 18-64 years of age, males)

This age group of the population is actively engaged in work. Changes in the state and demographic structure of this population group have a direct influence on the formation of the size of the labor resources in the national economy. During the 1981-1985 period, the population in the productive age will increase, however, its year to year growth will fall from 213,000 persons in 1981 to 52,000 persons in 1985.

The total population in the productive age will rise from 21,229,000 persons in 1980 to 21,882,000 persons in 1985; this means an increase of 653,000 during the entire 5-year period. As for the years 1976-1980, the growth will be twice as small, which means, that the present 5-year period possesses significantly altered determinants in the economics of labor resources. This will enforce the need to conduct a more logical and active policy in the utilization of these resources. During the present 5-year period, more than 0.5 million fewer persons will enter the labor market than in the previous 5-year period.

Typical of the current 5-year period is likewise the framework of the population growth of those in the productive age bracket according to sex. In the general estimated growth of 653,000--513,000 are males, while only 140,000 are females. This signifies that in the general population growth, women in the productive age account for hardly 21 percent in the current 5-year period, while their participation in the past 5-year period accounted for more than 50 percent of the general growth.

POSTPRODUCTIVE POPULATION (60 years of age and over, females; 65 years of age and over, males)

This category of the population will reflect solid growth in the present 5-year period. It numbered 4,238,000 persons in 1980, and will grow to 4,493,000 persons in 1985; that is an increase of 255,000 persons in the entire 5-year period. This warranted the necessity to expand services for the retired and other social services which the elderly are entitled to. The approaching years will require greater concentration on the needs of this population group in our society, which slowly but surely succumbs to the aging process. The population in the postproductive age will represent about 12 percent of the total population of our country in the current 5-year period.

The problems presented in the general, national framework are not all inclusive of the total complexity of the demographic determinants of the socioeconomic processes of the 1981-1985 period. These determinants will reflect significant distinctions, on a broad plane, in connection with the discriminatory course of demographic processes in the individual provinces, cities and districts. Because of this, it is advisable to analyze the whole of the problem more carefully in particular units of the administrative division of the country in compliance with their specific demographic determinants. This will permit a genuine ascertainment of the scope and peculiarity of the individual problems; and the location of adequate methods to solve them; which in effect will permit a more rational utilization of our resources both on a national, as well as a local scale.

POPULATION GROWTH ON THE BASIS OF GROUP AGES FOR THE YEARS 1976-1980 and 1981-1985

<u>Specifications</u>	<u>Population Growth</u>		<u>Growth Structure</u>		<u>Growth Rate 1976-1980 = 100</u>
	<u>1976-1980</u>	<u>1981-1985</u>	<u>1976-1980</u>	<u>1981-1985</u>	
Total Population	1,574	1,575	100.0	100.0	100.1
Preproductive age 0-17 years of age	160	667	10.2	42.3	416.9
Productive age					
18-59 years of age (female)					
18-64 years of age (male)	1,266	653	80.4	41.5	51.6
Postproductive age					
60 years of age and older (female)					
65 years of age and older (male)	148	255	9.4	16.2	172.3

Source: Demographic Year Book, 1976, and migrant prognosis of population development during the years 1980-1985, Main Statistical Dept., [GUS], 1980.

POLAND

RADIO, TV PUBLIC POLL CONDUCTED

Warsaw ANTENA in Polish 4 Jul 82 pp 1,3

[Article by Stefan Szostkiewicz, Deputy Director of Public Opinion Research and Program Studies: "How We Were Watched and Rated?"]

[Text] The Center for Public Opinion Research and Program Studies [OBOPISP] conducts systematic surveys on the popularity of radio and television programs. Today we are presenting an analysis of a detailed questionnaire survey conducted by the Deputy Director of OBOPISP, Dr Stefan Szostkiewicz. This survey applies to May [1982].

May is a month of a somewhat reduced television popularity, especially so because the length of the day and the beautiful, warm weather encourage people to spend more time outdoors in the fresh air than in front of a TV set. This does not mean, however, that a truly attractive information or entertainment program has no chance of drawing a record large viewing audience. May of 1982, was one of the "average" months, without any particularly popular programs, but also without any significant drops in the size of the viewing audience or in the evaluations with respect to fixed, regular programs.

The viewers of TV News (DTV)--in particular the main and the evening DTV programs--were represented in somewhat larger numbers in May, as compared to the averages for April (average share of the audience for the main DTV was about 55 percent, for the evening DTV it was about 10 percent), and were evaluated similarly to those in April.

Equally, one does not observe any difference in May--as compared to other months--in the share of the viewing audience, and their evaluations, of such programs as "Impulsy" [Impulses], "Interstudio" [inter Studio], "Wszystko o reformie" [All About the Reform] and "Monitor Rzadowy" [Government Monitor].

It is worth noting that the last mentioned program attracted in May an audience which was identical in size (33 percent) to those attracted in March and April, when on Friday evenings it preceeded directly a true "bestseller": "Szpital na peryferiach" [Hospital in Suburbia]. This bears witness to the

fact that the "Government Monitor" gas gained a group of steady, interested viewers who watch it without regard to the program that follows.

In May, as always, we presented programs and reports on the course of the "Race for Peace" bicycle race. This year we [Poland] did not do too well in the race, therefore, the size of the viewing audiences was rather modest (average per broadcast from final stages--29 percent, the evaluations were also modest: 19 percent of "very good" evaluations. These indicators were somewhat better than those from the preceding year, but much worse than in 1976, the best year on record. At that time the final stages of the race drew 46 percent of the audience and 44 percent of "very good" evaluations. We had a reason to be proud of our Polish bikers in that year.

The past May was considerably rich in TV serials. The, certainly not a peak achievement of the Italian television, "Zbuntowana" [Woman Who Rebelled-- original Italian title not given], describing the fate of an unlucky feminist at the turn of the century, was accepted initially by the Polish viewers with a dose of mistrust (audience share 60 percent--19 percent of "very good" evaluations), however, the succeeding episodes gained both in popularity and in evaluations. Average audience share for the entire series--68 percent, 32 percent of "very good" evaluations. The last episode brought in 46 percent of the highest evaluations. The TV viewers had grown to like the sad, beautiful heroine.

Also in May we saw the start of a Czech serial: "Dom na Sojczym Wzgorzu" [The Hospital in Suburbia." Here is a small comparison: the last episode of the "Hospital" received a 70 percent share of the audience and the percentage of "5's" [top evaluation] was 50; the figures for the "House..." were: 55 percent audience share and 18 percent of "very good" evaluations. The "Hospital" was undoubtedly a programming "blockbuster" while the "House on Jay Hill" received a rather cool reception. We will see how it progresses as the action develops, however, judging by the first five episodes which were aired in May it will surely not reach the level of indicators achieved by the "Hospital in Suburbia."

Better prospect for a higher evaluation has an English serial about the ups and downs of an English landowner living at the onset of the century: "Tamte lata, tamta dolina" [Other Years, Other Valley]. Although the audience shares for episodes aired in May did not exceed 60 percent, nevertheless, the evaluations certainly climbed: first episode--25 percent "very goods" and the third episode had already reached 39 percent of "very goods." If this sympathetic heir does not offend the Polish viewers, this program has a chance of reaching very high evaluations.

A compatriot of the young Englishman: Charles Darwin, the world renown scientist, registered far less success with the viewing public. Unfortunately, a famous name, an exotic sea voyage and abundant set decor do not alone make a successful recipe for a program's popularity. The serial, which is aired on Saturday afternoons, did not get a chance for a larger share of the audience since it follows the main edition of the news. On average "Charles

"Darwin" gained an 18 percent share of the viewing audience. The evaluations were faring no better: they grew from the first through the third episodes (from 22 to 36 percent of "very good") only to decline in the succeeding ones down to 24 percent of "very good." This is an indication of disappointment.

Finally, the re-run of a Polish high adventure serial: "S.O.S." which was aired as a Saturday Night Movie. The editor, Kostron, had a difficult task to defend his position in a viewing slot which was earlier held by such programs as: "Sierzant Anderson" [Police Woman], not to speak of "Aniolki Charliego" [Charlie's Angels]. All the same he did defend himself successfully with a sizeable, and subsequently growing share of the viewing audience (program's average share was 40 percent, this is considered a success at this late time of the day). However, the evaluations for particular episodes were rather modest (average of 26 percent of high evaluations). What is worse, as it was in the "Darwin" case, the evaluations were initially growing and then begun to shrink. This program did not catch on in the same manner as the, shown two months earlier, triumphal afternoon re-run of: "Stawka wieksza niz zycie" [Stakes Higher Than Life Itself].

If it is of interest to anyone, as to what may be regarded as May's most successful "bestseller," we would answer without hesitation: "Przygody Sindbada" [Adventures of Sindbad], aired on sunny Sunday afternoons--47 percent of audience viewing share and 43 percent of "very good" evaluations growing to 54 and 57 percent respectively. The Japanese have found Polish fans--especially children.

The Monday's Television Theater did not achieve any particular distinction in May. The largest share of the audience went to "Lekkomyslna Siostra" [Frivolous Sister], aired on 10 May, with a 54 percent share of the viewing audience and 22 percent of the "very good" evaluations.

Among the movies, the great success of "Swiat komedii Harolda Lloyda" [The Comedy World of Harold Lloyd] deserves attention. Aired in a bad television programming slot--Sunday, 16 May at 10:30--it reached 40 percent of the viewing audience and gained 47 percent of the highest evaluations. A large audience was also assembled to view, following the main TV news, a two-part movie: "Abelard i Heloiza" [Abelard and Heloise]--67 percent share. The evaluations were tempered--22 percent of "very good." This could explain the reason why the second installment was viewed by a 56 percent share of the audience and received the same in evaluations.

Notes on a famous, and long awaited on our small screen, movie "Easy Rider" should be of interest. This movie, screened on Thursday, 13 May, after the news, attained an absolute record of audience share for May--69 percent. However, only 14 percent of the viewers gave the program a "very good" evaluation. It did not appeal to the majority of the public, the divergence between the numbers for the viewing public and the credits was very apparent. Perhaps it was not right to air this movie on a Thursday. This was, for several years, reserved for criminal drama shows. Perhaps the movie needed

an introduction. In any case, the low percentage of the highest evaluations can be regarded as a complete disappointment.

Since we are already talking about the, so called, Thursday's movies, it should be worth noting that the best received movie in May was an old Polish drama: "Spotkanie ze szpiegiem" [Meeting With a Spy], aired on 10 May. It received a 63 percent of the viewing audience's share and 22 percent of "very good" evaluations.

From among the programs aired in May on II TP [Second Program of Polish Television], some of them could be distinguished by somewhat higher viewing audience shares and evaluations. For instance, the re-run of "Wlasnie leci kabarecik" [There Goes the Cabaret], the Muppet Show and the light music concerts: "Hallo, tu orkiestra i balet telewizji czechoslowackiej" [Hello, Here Are the Orchestra and Ballet of the Czech Television] were such programs.

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POLISH EXPORT OF LICENSES DISCUSSED

Warsaw SPRAWY MIEDZYNARODOWE in Polish No 12, Dec 81 (signed to press March 1982)
pp 81-90

[Article by Jan Maciejewicz, senior teaching assistant at the Institute for International Economic Relations of the Main School of Planning and Statistics: "Polish Export of Licenses"]

[Text] Export of licenses is often regarded as one of the measures of an economy's modernness. This conviction has rational premises in international economic relations, for the organizational units selling technical ideas in the form of licenses are most frequently the American, Swiss, British and West German firms. At present, approximately 80 percent of licensing revenues accrue to the highly developed capitalist countries and the remaining portion is divided evenly between the developing and socialist countries.

The socialist countries obtain a minimal amount of income from the sales of licenses, which only to a small degree covers their expenditures for this purpose. Poland, too, has a constant deficit in its licensing exchange with other countries. During the postwar period, revenues obtained from sales of Polish licenses have been sufficient to purchase only about three percent of the foreign licenses.

Rarely, in international economic relations, is transfer of technology not connected with the export of investment and supply-co-production goods. Technical ideas, as a rule, act as a stimulator for the exchange of goods. It is important, therefore, that the sales of licenses be followed by the largest and most effective export of bulk goods possible. A study of the impact of the export of licenses on an increase in export of goods under Polish conditions is, unfortunately, impossible due to lack of pertinent and complete statistical information. It is, however, possible to make an analysis of export of licenses which gives a certain picture of the indirect impact of the sales of technical ideas on Poland's export growth potential in the area of both goods as well as technical services.

Development of Export of Licenses

The first, after World War II, licensing agreement, pertaining to a single-phase electricity meter, was concluded by Poland with India in 1958. The next license was sold in 1963. Since that time, this export is a constant item in our foreign

turnovers, while the number of agreements concluded each year fluctuates from one to 18. Overall, during 1958-1980, Poland concluded 144 licensing contracts for 110.5 million foreign-exchange zlotys.

The largest increase in sales of Polish scientific-technical achievements took place in the second half of the 1970's, and especially during 1977-1979 when a total of 48 licenses for 45 million foreign-exchange zlotys were exported. These three years, therefore, accounted for one-third of the licenses exported, or over 40 percent of their value. In 1980, this strong growth tendency came to a halt. Consequently, during the entire postwar period there was no long and stable period of growth in sales of licenses. This attests to an absence of consistent licensing policy. This export is, in fact, accidental, for it has no bases in long-range strategy in this field.

The number 144 licenses does not mean that Poland sold exactly that many scientific and technical achievements. In the postwar years, 97 technical solutions were made available to foreign contracting parties. On the basis of the agreements that were analyzed, it may be said that Polish export of licenses rests on scarcely several original, innovative from the technical standpoint, solutions, which as a rule have not yet been applied in production on an industrial scale. It is difficult, therefore, to talk about licensing policy.

The T. Rut method of forging crankshafts is foremost among the export licenses. The secret of the success of this technology is due primarily to the strong involvement of the method's inventor, who is constantly improving it, thus making further sales possible.

The following technical solutions met with the highest demand abroad during the period mentioned:

- the T. Rut method - sold 17 times (Ministry of Machine Engineering Industry);
- the repair of cracked blocks and machinery and equipment housings, the Metalock method - 6 times (Ministry of Metallurgy);
- wire-drawing pressure dies - 5 times (Ministry of Metallurgy);
- a technology for producing aluminum oxide and cement - 4 times (Ministry of Chemical Industry);
- a technology for granulating sulphur - 4 times (Ministry of Chemical Industry);
- a quick-hardening core- and molding-sand mixture and the hardening method, the Syncor process - (Ministry of Metallurgy).

Altogether, Poland granted 40 licenses for over 30 million foreign-exchange zlotys for the technical solutions mentioned, which is 27.8 percent of the number and 27.3 percent of the value, of the total contracts concluded by our country. The Ministry of Metallurgy was the most frequent seller of the same technical solution.

Table

Polish Export of Licenses by Ministries and Groups of Countries During 1958-1980

<u>Details</u>	Number of agree- ments	Percent total	Value of agreements in millions of foreign-exchange zlotys	Percent total
Total	144	100.0	110.5	100.0
including:				
until 1970	40	27.8	23.0	20.8
1971-1975	44	30.6	22.8	20.6
1976-1980	60	41.6	64.7	68.6
Ministry:				
Machine Engineering Industry	35	24.3	18.7	16.9
Metallurgy	39	20.1	8.6	7.8
Chemical Industry	21	14.6	33.3	30.1
Science, Higher Schools and Technology	13	9.0	4.0	3.6
Remaining ministries	46	32.0	45.9	41.6
Socialist countries	48	33.3	44.0	39.8
including:				
GDR	13	9.0	13.7	12.4
CSSR	12	8.3	12.1	11.0
Remaining socialist countries	23	16.0	18.2	16.4
Developed capitalist countries	80	55.6	34.0	30.7
including:				
FRG	21	14.6	8.2	7.4
United States	10	7.0	3.3	3.0
Great Britain	9	6.2	4.9	4.4
Remaining developed capitalist countries	40	27.8	17.6	15.9
Developing countries	16	11.1	32.6	29.5

Source: The author's computations based on data of the Central License Register
of the Foreign Trade and Maritime Economy Information Center.

Attention should also be called to the growing interest in the license for the
technology of granulating sulphur. Total revenues from the sale of this license
amounted to 8.3 million foreign-exchange zlotys, or almost the same as the income
from the sale of the license for the T. Rut method.

Polish export of licenses is connected with the export of goods to a very small
degree. The meager statistical information does not permit an accurate study of
the problem, but from the data available it appears that of the 144 licenses sold,
only several were the direct cause of the export of machinery, equipment, and
materials for production. It can be presumed, with a great deal of probability,
that export accompanying the sales of scientific and technical achievements does

not exceed the total revenues from license payments, and probably is much lower. The normal situation in world trade is for the value of income from accompanying export to be several times higher than the amount of licensing revenues.

Also, the prices negotiated in concluding licensing agreements are relatively low. For one exported license, Poland obtained an average of 0.8 million foreign-exchange zlotys during the period studied, while over 4 million foreign-exchange zlotys were paid to western licensors.¹ During 1958-1980, in order to purchase one foreign license, five of our own had to be sold.

The main reason for this state of affairs is the fact that the ministries are selling mostly the so-called "green" innovations², i.e., those not yet applied in domestic production, and thus carrying with them a great element of risk, both technical and trade. Hence also, despite the originality of the solutions offered, they are not of standard value, which is reflected in the prices obtained.

At this point we should also call attention to another element which determines the size of the export of licenses, that is, the range of patent protection on Polish inventions made available on the basis of licensing agreements. Of the 144 licenses sold, 56, i.e., 38.9 percent, were patent licenses. In the basic ministries exporting scientific-technical achievements, the share of this type of license is close to the national average. The exception is the Ministry of Construction, in which this type of license is used much less frequently. In the particular ministries, patent licenses made up the following shares in the total number of agreements concluded by them:

- Ministry of Machine Engineering Industry - 38.5 percent,
- Ministry of Metallurgy - 34.5 percent,
- Ministry of Chemical Industry - 38.1 percent,
- Ministry of Construction - 11.1 percent,
- Ministry of Heavy and Agricultural Machine Industry - 33.3 percent,
- remaining ministries - 54.8 percent.

The high percentage of patent licenses in the remaining industries was due mainly to their large share of private patent owners in export (without intervention of any ministry), which amounted to 85.7 percent.

In the export of licenses there is considerable less, in comparison with import, concentration both geographically and by branch. Over 60 percent of the licenses purchased by Poland after the war were purchased from four countries (FRG, Great Britain, the United States, and France). However, on the export side, our four

¹ Calculated on the basis of J. Cieslik and R. Rąpacki: "Restrictive Clauses in Agreements for the Purchase of Licenses in Developed Capitalist Countries". Warsaw, 1980 (typescript).

² See R. Rąpacki: "Polish Export of Licenses", ZYCIE GOSPODARCZE, 25 May 1980.

largest licensees (FRG, GDR, CSSR and the United States) accounted for not quite 40 percent of the number and value of agreements. In total, during 1958-1980, Poland exported licenses to 31 countries, of which seven were socialist countries, 15 developed capitalist countries, and nine developing countries. There are large differences between the shares of the particular groups of countries in numbers of licenses imported from Poland and their value. The smallest difference appears in the case of the socialist countries. However, the export of Polish licenses to the developed capitalist countries and to the developing countries shows large differences in this regard. On this basis, we can formulate the following conclusion: Licenses sold by Poland to developed capitalist countries are either smaller in dimension (pertain to less-important technical solutions, or are sold cheaply in comparison with licenses placed on the markets of developing countries. Thus the thesis can be advanced, one that is raised quite often in the literature on this subject, that the natural and most profitable direction for export of licenses by a country which is at the average level of economic development, and Poland is such a country, are the less-developed countries.³ This thesis should be considered in formulating strategy of development in this field.

Also, an analysis of the structure of license sales in the branch system leads to the conclusion that the concentration of purchases exceeds the concentration of exports. Three ministries (machine engineering industry, heavy and agricultural machine industry and chemical industry) account for over 80 percent of the number and over 90 percent of the value of licenses purchased, and the three largest ministries selling Polish licenses (machine engineering industry, metallurgy, and chemical industry), account for 59 percent and 55 percent, respectively. This considerable difference stems from the relatively low share that the Ministry of Machine Engineering Industry has in the export of licenses, and which also holds a dominating position among Polish licensees.

However, a much greater concentration of sales occurs if we take into account the structure of export by foreign-trade enterprises. POLSERVICE accounts for 73.6 percent of the number and 57.8 percent of the value of licensing agreements concluded. CIECH is in second place, with 7.6 percent and 13 percent, respectively. In recent years there has been pressure in Poland for the foreign-trade branch enterprises to take over the export of licenses, along with a reduction of the actual primacy of the POLSERVICE enterprise in this field. It is contended that since they are closest to the owner of the technical solutions being sold, and know the branch the best, they are naturally most validated to implement the licensing agreements.

The low level of Polish export of licenses during the period studied is due also to the weak innovativeness of industry, thus the barely perceptible influence of the production sphere on the research and development sphere. As a result, the largest part of the agreements concluded for the sales of licenses pertains to technical solutions that are not used in production. Indirectly, because of lack

³See, for example, J. Maciejewicz: "Licenses for Export", FOREIGN MARKETS, 11 October 1980.

pertinent data, this is shown by the fact that of 97 technical solutions sold, 62 (64 percent) pertained to constructions which as a rule are not applied on a full production scale.⁴ The technologies, of which 24 (24.7 percent) were sold, were similar in nature. However, licenses of the know-how type, i.e., those that pertain to specific production experience obtained by the licensors during the manufacturing process, make up the smallest portion of the available licenses--only 11 (11.3 percent).

Based on an analysis it may be said that the structure of Polish export of licenses underwent systematic improvement during the period studied. The share of licenses for construction dropped from 60 percent during 1958-1970 to 40 percent during 1976-1980, and also, in recent years, all licenses of the know-how type were sold. However, licensing agreements pertaining to technologies showed a strong shrinking tendency.

The above conclusions are also confirmed by information pertaining to sources of origin of the exported technical solutions. Of 144 licenses sold by Poland, 86, i.e., 59.7 percent, are in scientific-research facilities: the basic portion of exporters in this sphere come from scientific-research and development institutes, and 14 percent of export supply can be ascribed to the higher schools. Industry accounts for 40.3 percent of export. The structure of export of licenses in particular subperiods was as follows: to 1970, both these spheres participated in equal amounts in the export of licenses; during 1971-1975, the research and development sphere increased its share to approximately three-fourths of export, while during 1976-1980, the scientific-research facilities exported 60 percent of the licenses, and industry, 40 percent.

Impact of the Export of Licenses on the Export of Goods

Available statistical data do not precisely state the specific value of the export of goods, which, indirectly, may be initiated by an earlier conclusion of licensing agreements with foreign contracting parties. The contract conditions, under which Poland sells licenses, may, however, pave the way for the export of goods.⁵

One of the restrictions frequently used in licensing agreements are clauses which control the export rights of foreign licensees. Various degrees of restrictions can be applied here, from a ban on exports to the right to sell, by license, in sales markets indicated by the owner of the technical solution. In defining the scope of the operation of restrictions, the licensor is guided by his own interests and considers the possible losses and benefits that would result from the signing of a licensing agreement. In a situation where the seller of a technology exports, or intends to export (on the basis of a certain technical solution) products on a specific sales market, it is understandable that he will try to restrict the licensee's export abilities, unless he is not able to himself satisfy the demand for a given product.

⁴ See R. Rapacki: op cit.

⁵ The reference point are the contract conditions in importing licenses into Poland. See J. Cieslik and R. Rapacki: op cit.

Analysis of the licensing agreements concluded shows that Poland applies restrictions pertaining to export of licensed production on a much wider scale than do the western partners of Polish licensees. While in the import of licenses into Poland a total ban on exports occurred in 11.5 percent of the number and 3.8 percent of the value of the agreements, in the export of licenses, Polish enterprises concluded clauses banning the sale of licensed products outside the borders of the country-licensee in 53.5 percent, by number, and 39.5 percent, by value, of the contracts. These types of restrictions were especially prevalent during the first half of the 1970's, whereupon towards the end of the past decade, there were fewer of them. Also, the number and value of the licenses exported without any restrictions increased regularly during the 1970's. It should be emphasized that a strong restrictive policy in the area of transfer of technology from countries that are not traditional exporters of this technology, is normal in international economic relations.

Where, however, a partial restriction of the right to export is concerned, the principle of not granting the right to export to markets of socialist countries in selling technical ideas to licensees of these countries, is clearly taking shape, and similarly, restricting the exporting rights of western firms in relation to markets of the capitalist countries. Poland's western partners apply this same principle in selling us licenses: they guard the western sales markets against Polish export to a larger degree than the eastern markets.

It should be added, however, that protection of the licensor's interests through use of export restricting clauses in the agreements is not only a reflection of the licensor's policy in this area, but is also the result of the type and importance of the technical solution offered, the partners' negotiating strength, etc.

Polish enterprises sell mainly pure licenses, i.e., those that are not accompanied by additional export of goods. Hence the large number of restrictions in the export of licenses appears to be without purpose. For if goods produced on the basis of the technical solutions possessed are not being exported, then why restrict the possibility of their sales by Polish contractors? The only explanation may be that such export is being anticipated by our enterprises, but for various reasons it cannot be done.

Another, in addition to exporting restrictions, element of licensing agreements used to protect the licensor's interests, is that of specifying the length of the validity period of the licensing agreement. During this period, the exporter of the license is legally insured against the licensee's non-compliance with the agreements concluded. This element, at least under Polish conditions, should be examined together with the contract clauses pertaining to export restrictions. If Polish enterprises are greatly curtailing the right of the contracting parties to export licensed products, with the idea that in the future they will sell these products, then they should insure themselves against competition from the licensees by correspondingly setting the period that the agreement is to be in effect. A study as to whether this period has been established correctly in practice, is possible only in relation to specific licenses. The average period of validity of agreements concluded by Poland was 6.3 years during 1958-1980.

In the case of clauses restricting sales in Polish export and import of licenses, a diametrically different situation occurred. An analysis of clauses pertaining to

the right to use the licensor's trademark gives a similar picture. Polish importers of western licenses were authorized to use trademarks in 73.7 percent, by number, and 65.1 percent, by value, of the contracts. However, in selling Polish technical solutions, 29.2 percent of the number and 32.7 percent of the value of the licenses gave their purchasers the right to use the licensor's trademark. The trademark, as a form of promoting export, is still not being used in our country on a large scale, although some of the enterprises are held in high regard by foreign customers. The small share of licenses sold together with the trademark of the Polish licensor is, therefore, the result of weak promotional activity in this field and stems more from an unwillingness to obtain the right to use it by the foreign contracting parties, than from restrictions on its availability by our enterprises.

The next element in contract conditions which have an indirect impact on an increase in exports from Poland are clauses restricting the right of the licensees to grant sublicenses abroad, thus restricting the dissemination of the licensed technology outside the country that purchased the license. In applying this type of restriction, the licensor obtains control over use of his technical solution, and by so doing he can control the size of the supply of licensed products, adapting it to anticipated demand.

Polish licensors, just as western in relation to our country, take advantage of these restrictions on a broad scale in granting sublicenses by foreign licensees. This is shown by the following data: total or partial (in relation to selected countries) restrictions apply to 87.5 percent, by number, and 89.3 percent, by value, of the agreements concluded for the sale of licenses. Poland conducts the most liberal policy in this area in relation to developing countries, and the most restrictive, in relation to developed capitalist countries.

It is well also to call attention to the fact that restrictions of this type are relatively easy to circumvent, particularly by firms that have a strong research and development base. The basis of the licensing policy of such firms is energetic post-licensing activity, which, unfortunately, cannot be said about Polish enterprises. As a result of this activity, the object of the license can be improved enough so that it represents a technical solution that fundamentally differs from that purchased in the form of a license, and under these circumstances, there is nothing standing in the way of granting a new license on it. Hence the conclusion that a licensor should thoroughly investigate the advisability of selling the technical solutions that he possesses and himself conduct the development work on them.

The next factor indirectly influencing the competitive position of Polish export on the world market is the nature of the licensing agreements concluded. Particularly important here is the division into exclusive and non-exclusive licenses.⁶

⁶ "An exclusive license is granted when the licensor binds himself in the licensing agreement that during the period that this agreement is in effect he will not grant this same--as to scope--license to anyone else. By the terms of a non-exclusive licensing agreement, however, the licensee obtains permission to make use of the solution on which the licensor either has already granted, or will grant, licenses to other partners." Citation from F. Kulpa: "Economic Problems in Obtaining Foreign Licenses." Warsaw, 1980, p 24.

In agreements for the purchase of foreign licenses by Poland, non-exclusive licenses are in the majority, constituting 62.5 percent of their total number and 50 percent of their aggregate value. It is the same in international licensing operations--non-exclusive licenses decisively predominate. However, their share in the total number and value of licenses exported by Poland is somewhat less than the share in import, amounting to 54.4 percent and 41.7 percent, respectively. In addition, there are considerable differences here in the subsector and geographic distribution, but only as to number. Polish enterprises, therefore, are conducting a correct policy in establishing the nature of the licenses sold, insofar as they have an actual influence on this. The correctness of the above conclusion may be proven by the fact that agreements with the largest purchasers of our technical solutions are for the most part non-exclusive, thus Poland is maintaining a strong competitive position on these markets. However, exclusive licenses are sold mainly to countries which are importers of a small number of technologies, and primarily those that the basic purchasers from the developed capitalist countries would not buy from us anyway.

Finally, an element of licensing contracts that has an impact mainly on the export of Polish technology are the restrictions on the rights of the licensees to use the licenses in specified organizational units. The licensor may restrict the dissemination of the technology that he is selling only to an enterprise specified in the agreement, thus inhibiting the possibility of a diffusion of the licensed solution in the importing country. Potential licensees who want to make use of a given technical solution must therefore buy a new license from the Polish exporter, giving him an opportunity to increase his sales. In restricting the diffusion of licensed solutions in the importing country, the licensor also improves his competitive position in the export of licensed products.

Most of the licenses granted by Poland during 1958-1980 restrict the use by the purchaser of the offered solutions to a specified production plant. Quantitatively, these restrictions apply to 59 percent of the agreements, but in value, to 66.1 percent. It should be emphasized that Polish enterprises--exporters of technical ideas, apply this type of restriction on a wider scale than do western sellers of licenses to Poland. It appears that this is due mainly to the fact that in the opinion of the exporters of licenses to Poland, the possibilities of diffusion in our country are limited, and in view of the high monopolization of production, restrictions in this area do not have to be applied.

The least restrictive policy in this field is conducted by Poland in relation to developed capitalist countries, while the largest number of restrictions appears in contacts with developing countries. The particularly privileged countries are Great Britain and the FRG.

The Sale of Licenses and the Technical Development of Polish Exporters

The sale of licenses can be looked upon as a kind of verifier of the technical level of a national economy. Countries which are highly innovative also lead in the export of technical ideas. Poland, at least thus far, is not a world leader in this field.

One method of raising the country's technological level may be post-license cooperation, consisting of an exchange of improvements on the product of the license between

the seller and the importer. This exchange may be binding on both contracting parties or on only one of them, and the transmission of improvements may take place on payment principles or free. Post-license cooperation is, as a rule, very important for countries that are at an average or low stage of economic development, creating for them the applicable conditions for narrowing the technological gap in relation to the most developed states. Raising the technical level has a direct impact on the competitive position in export and the place of the given country in the international division of labor. Post-license cooperation, based on pertinent clauses in the licensing agreements, may thus have far-reaching implications for the partners in a licensing exchange. Furthermore, a correctly implemented mutual exchange of improvements in the licensed products may as a result lead to broad co-production cooperation by the partners.

Statistical data on post-license cooperation also point to the partners' negotiating strength, stemming from their actual ability to make improvements in the licensed technology. They say nothing, however, about the real side of this problem. Only the willingness of the partners to cooperate emerges from them, and not its final result.

In total, in the postwar years purchasers of Polish technology in license form were obliged to an exchange of improvements in 41.6 percent of the number and 55.7 percent of the value of agreements; however, Polish exporters of licenses, 50 percent of the number and 65.3 percent of the value of agreements. Analysis shows that in the particular subperiods, post-license cooperation between Polish licensors and foreign purchasers of our technical solutions weakened at a rapid rate. Up to 1970, licensees were bound by the terms of the contract to transmit improvements in 62.5 percent of the number and 90.4 percent of the value of the agreements, but in 1976-1980, these shares dropped to 41.7 percent and 50.7 percent, respectively. One reason for this state of affairs may be the fact that in the final years of the past decade Poland concluded many agreements with developing countries, which as a rule do not have a suitable scientific base for establishing post-license cooperation, and as a result, Polish licensors also rarely committed themselves to the transmission of improvements.

The willingness for post-license cooperation during the period studied also weakened systematically on the part of the Polish licensors. While, up to 1970, exporters of technical ideas from Poland were obliged to transmit improvements in 67.5 percent of the number of agreements and 91.3 percent of their value, during 1976-1980, the figures were 53.3 percent and 66.4 percent, respectively. This phenomenon is difficult to interpret unequivocally, since on the one hand, the technical monopoly of the Polish licensors was strengthened, yet on the other hand, the benefits stemming from comprehensive cooperation with foreign enterprises decreased.

Insofar as the subsector structure of this cooperation is concerned, the Ministry of Chemical Industry and the Ministry of Science, Higher Schooling and Technology, obtained the most information on improvements in licensed technology during the period studied. In turn, of Polish licensors, those who showed the most inclination towards post-license cooperation were the Ministries of Machine Engineering Industry; Science, Higher Schooling and Technology; and Chemical Industry. Least inclined were the Ministries of Construction and Metallurgy.

However, by geography, from the standpoint of post-license cooperation, the most profitable contacts were with countries such as France, Great Britain and the United States, and relatively the least profitable were contacts with the socialist countries.

* * *

Recapitulating the above observations, the following conclusions may be formulated. An empirical examination of Polish export of licenses shows that it did not achieve large dimensions during 1958-1980. One of the reasons for our country's weak position in this field is the lack of a consistent and long-range licensing policy. This assertion applies also to the import of licenses, which may have a considerable impact on their export potential. The direction of research which should be undertaken in this field is the advisability of selling pure licenses, without accompanying export. The preparation of a statement of the losses and profits resulting from the implementation of this export should form the basis for a licensing policy in this area.

The fundamental weakness of the export of technical ideas from Poland is its minimal connection with the sale of machines, equipment and materials for licensed production. The geographic structure of our export should be deemed to be incorrect, because the developing countries, which should be the main sales market for Polish technical ideas, have too low a share in it.

An analysis of the individual elements of the licensing agreements shows that Polish enterprises-exporters apply restrictive clauses on a wider scale than do western suppliers of licenses to our country. This applies particularly to restrictions on export of licensed products and restrictions on using licensed technology in a specified production plant in the country-licensee. It should be said that from the standpoint of the national economy restrictive clauses do a good job in safeguarding the interests of Polish firms both in the area of their competitive position in export as well as in maintaining a technical monopoly on the solutions possessed.

Contract terms, therefore, are not the reason for the low level of the export of Polish technology, but neither are they suitable protection for technical development of Polish exporters of licenses, based on post-license cooperation with exchange partners. A similar situation appears in the import of licenses. This has an adverse influence on increasing the potential of the export of technology from Poland and on following the direction of scientific-technical progress in the countries that are leaders in this respect. It thus widens the technological gap between them and our country.

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YUGOSLAVIA

TRADE WITH DEVELOPING COUNTRIES IN FOREIGN TRADE STRUCTURE

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 21 Jul 82 p 3

[Article by Andja Petrovic: "Long-Standing Goals Are Being Achieved"]

[Text] The goals of Yugoslav foreign trade are to increase the export of products in a higher stage of manufacture for convertible currencies and to confine imports to what is necessary. These goals have mainly been achieved in economic relations with the developing countries. Recently the results have been improving still more and offering hope that the ambitious programs set forth will in fact be carried out.

Status of Exports and Imports up to 21 June 1982, in thousands of dollars

<u>Region</u>	<u>Exports</u>			<u>Imports</u>		
	<u>1981</u>	<u>1982</u>	<u>Index</u>	<u>1981</u>	<u>1982</u>	<u>Index</u>
Developing countries	781.7	925.0	118	1,272.4	1,003.3	79
Advanced Western countries	1,180.4	1,348.8	114	3,529.8	3,249.9	92
Socialist countries	2,354.0	2,368.0	101	2,344.4	1,944.9	83
Total	4,316.2	4,641.8	108	7,146.6	6,198.2	87

Still more recent figures show the status as of 8 July. The index number of the growth of exports of the Yugoslav economy was 109 at that time, that of imports 89; exports to the developing countries 122, and imports 83; exports to the advanced countries of the West 113, and imports 95; and exports to the socialist countries 102, and imports 84.

Arab Countries: Very Near the Balance of Trade

In Yugoslavia's total foreign trade trade with the developing countries has risen appreciably--to about 20 percent, which has been a long-standing goal and commitment. It is still more significant that imports and exports have almost come into balance--exports have covered 95 percent of imports. The leaders in Yugoslav exports are machinebuilding and power machinebuilding, and they show a tendency to stay in first place for the next 5 or 10 years at least. Nor has work on capital investment projects and services been included in all this.

For 1982 the Yugoslav economy plans exports to the developing countries in the amount of \$2,518 million. Only 36 percent of this had been achieved by 21 June. The growth of exports planned was 25 percent over 1981. In value terms \$1.34 billion of exports were destined for the Arab countries, \$490 million for the Asian countries, \$538 million for the tropical countries of Africa and \$150 million for Latin American countries. In the first half of the year the overall lag was about 7 percent behind the export plan.

Business has been best with the Arab countries--exports have risen 27 percent: 86 percent with Iraq, 8-10 percent with Egypt, 400 with the United Arab Emirates, 46 with Saudi Arabia, 48 with Kuwait and 900 percent with Qatar. There have been snags in trade with Libya and Algeria: a few months ago those countries asked for work on capital investment projects to be paid for with deliveries of petroleum, but the mechanisms for this have not been set up in our country. It is assumed that by the end of 1982 the 20-percent delay with Libya and 30-percent delay with Algeria will be made up.

Asian Countries: Unless Certain Conditions Are Met

The principal feature in exports to the Asian countries has been Iran, with which trade has been conducted with the help of an interbank arrangement over which there have been quite a few disagreements between our bankers and exporters. A large portion of the lag will be made up, since by the end of June letters of credit have been opened for \$120 million, but that is not enough. Exports to the Asian countries amounting to \$34.3 million in the first quarter and about \$100 million for the first two quarters are insufficient. Sizable transactions are expected in the second half of this year primarily with Iran, Malaysia and Pakistan. The firms involved are Energoinvest, Iskra and Intertrade. India can satisfy expectations this year if an arrangement is made for cooperation in the manufacture of tractors and if there is an adequate supply of our goods, and also if our statutes and certain attitudes of the National Bank can be reconciled.

Tropical Africa: Desires Greater Than Achievement

The countries of tropical Africa are still a desirable market to a large extent: this market is as unresearched as it is large, and is therefore uncertain. The economic situation in those countries is deteriorating for the well-known reasons of the general business crisis, which is by all appearances hitting them worst, since they are the most dependent upon exports of their raw materials and on imports of food, petroleum and industrial equipment. Yugoslav exports to those countries in the first quarter were rather slender--\$12.3 million, or half of the same figure for last year. In the months to come four ships will be delivered to Liberia for \$101 million, and \$25 million worth of current goods have been sold in the first half of the year, so that exports will be twice as large as last year. However, the plan called for \$269 million. New deliveries of ships for \$233 million and goods for \$45 million will bring it up to about \$410 million in the second half of the year, which is considerably more than in all of 1981 (by \$160 million), but this would still be about \$120 million short of the plan. There have been difficulties, especially with deliveries of goods to Nigeria and Angola because of the difficulties those countries have been having making payments.

Latin America: After All Another Step Forward

Latin America and the Caribbean remain the weakest point of our commodity trade with the developing countries. The delivery of a ship to Barbados worth \$30 million and current goods worth about \$10 million will substantially improve the situation in the first half of the year, but because the delivery of two ships to Panama and Ecuador have been canceled (the hard currency is lacking to purchase their bananas), the planning of target of \$150 million--very modest--will be missed by about \$35 million, or 23 percent. This will still be 45 percent over exports for last year, when they amounted to only \$69 million. What can be done by the end of 1982 is to be done by Energoinvest with Mexico and Cuba--\$30 million, Ingra with Brazil and Argentina--\$5 million, Iskra with Ecuador, Mexico and Colombia--\$10 million, Astra, Slovenijales and Zastava with Colombia, Chile, Venezuela and Uruguay--\$7 million, and Prvomajska with Mexico--\$3 million.

This Year's Lesson

Our businessmen have several major arrangements in the stage of negotiation and expect to conclude contracts for work on capital investment projects in Ecuador and Peru in the amount of \$250 million over 5 years. Deliveries of railroad cars to Brazil in the amount of \$300 million would--if the contract is concluded--offset imports for several years to come.

This year's experience of Yugoslavia's foreign trade with the developing countries is very instructive: the realistic rate of exchange of the dollar and the credit financing of exports of equipment and ships have brought quite a few results. The more vigorous commitment of our economy, pressed by the necessity to look upon economic cooperation with the developing countries as their lasting commitment and a way out of many troubles, has also obviously contributed to the success. The awareness of this is crystallizing; it needs to be firmed up still more and spread more widely. Along with the discovery of new forms of cooperation, of course, aside from conventional trade with commodities for cash, which has been the predominant form up to now.

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YUGOSLAVIA

SEMIANNUAL FOREIGN TRADE DATA FOR REPUBLICS

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 4 Aug 82 p 2

[Article by M. Urosevic: "Total Deficit Is Decreasing"]

[Text] Viewed separately from the other economic developments in the country, foreign trade in the first 6 months of this year can be regarded as not only satisfactory, but even encouraging. Exports reached 204.7 billion dinars, while imports fell to 277.4 billion. Thus the coverage of imports by exports is now 73.8 percent, which is the second highest value since 1966, when 77.80 dinars were derived from exports for every 100 dinars paid for imports.

However, it is almost a rule that relations like those in foreign trade result in lower growth and indeed even stagnation of the physical volume of industrial output and other adverse phenomena, which indeed have been pronounced this year. Moreover, one cannot overlook the fact that what has been achieved was mostly the result of efforts of organizations of associated labor, but also of administrative guidance and of the linkage of imports to exports. There are also other specific features and defects which we will be discussing after a survey of the share of the various sociopolitical communities in the results achieved.

We do not see here the percentual increases of exports or imports which have to some extent become familiar for the simple reason that they are less essential elements than the coverage of exports by imports. If commodity trade were at least in approximate balance, then the growth of imports would not signify any burden at all, since exports would also grow. These two elements together represent an indicator of the country's share in the international division of labor, and its growth is the goal of any country's economy.

This indicator, the coverage of imports by exports--overall and also individually for each republic and province--indicates the intolerable nature of the situation in distribution of the "burden" of larger imports in which each of the eight sociopolitical communities is striving to show the smallest possible share for itself. This is achieved thanks to the fastest possible growth of the value of imports of articles indispensable to the country's entire population, articles whose import cannot be postponed, and the endless attempts to reach agreements on this. Although the Federation has nothing to export and thereby to cover its imports, except certain products of the arms industry, a

large portion of imports is attributed to it, and all of this naturally represents a deficit. The ultimate effect, however, as the table shows, is that the Federation has a share of only 0.2 percent in exports, a share of 3.7 percent in imports, and a share of 13.5 percent in the deficit (the third highest value after Croatia's 32.3 percent and the 16.7 percent of Serbia proper).

Results for the Period January-June 1982

Socio-political Community	In Millions of Dinars			Coverage of Exports by Imports, %	Share of Total, %		
	Exports	Imports	Deficit		Exports	Imports	Deficit
SFRY	204,698	277,354	72,656	73.8	100.0	100.0	100.0
Bosnia-Hercegovina	30,210	38,107	7,897	79.3	14.8	13.7	10.9
Montenegro	3,775	6,153	2,378	61.4	1.8	2.2	3.3
Croatia	46,112	69,916	23,804	66.0	22.5	25.2	32.3
Macedonia	10,526	16,060	5,534	65.5	5.1	5.8	7.6
Slovenia	38,867	46,171	7,304	84.1	19.0	16.7	10.0
Serbia proper	54,014	66,168	12,154	81.6	26.4	23.9	16.7
Vojvodina	16,889	20,596	3,707	82.0	8.2	7.4	5.1
Kosovo	3,896	3,967	71	98.2	1.9	1.4	0.1
The Federation	411	10,216	9,805	4.0	0.2	3.7	13.5

Were it not for anomalies of this kind, the deficit of each republic and province in absolute amounts and in percentages would be greater and together would represent the average value indicated for the entire country.

This way, given the present situation and relations, the semiannual foreign trade deficit has been reduced to 72.656 billion dinars, as against 123.993 billion at the same time last year, which means a reduction of 41.4 percent. The share of the various republics and provinces varies greatly. For example, Bosnia-Hercegovina is showing an ever smaller percentual share of exports as the first indicator, through imports as the second, and all the way to the deficit as the third. The specific figures are 14.8 percent, 13.7 percent and 10.9 percent, respectively. Slovenia, Serbia proper, Vojvodina and Kosovo also have this kind of descending series. Montenegro, Macedonia and Croatia, the share of the latter representing virtually one-third of the total, and, as we have already said, the Federation, have the opposite, ascending series of percentages.

Until these disproportions and anomalies are corrected, until every republic and province assumes its respective obligations, and not just its rights, which is, incidentally, being constantly insisted on, until the Federation is freed of the role of "debtor" without having a share in creating the debt, relations in foreign trade will not be more straightforward.

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